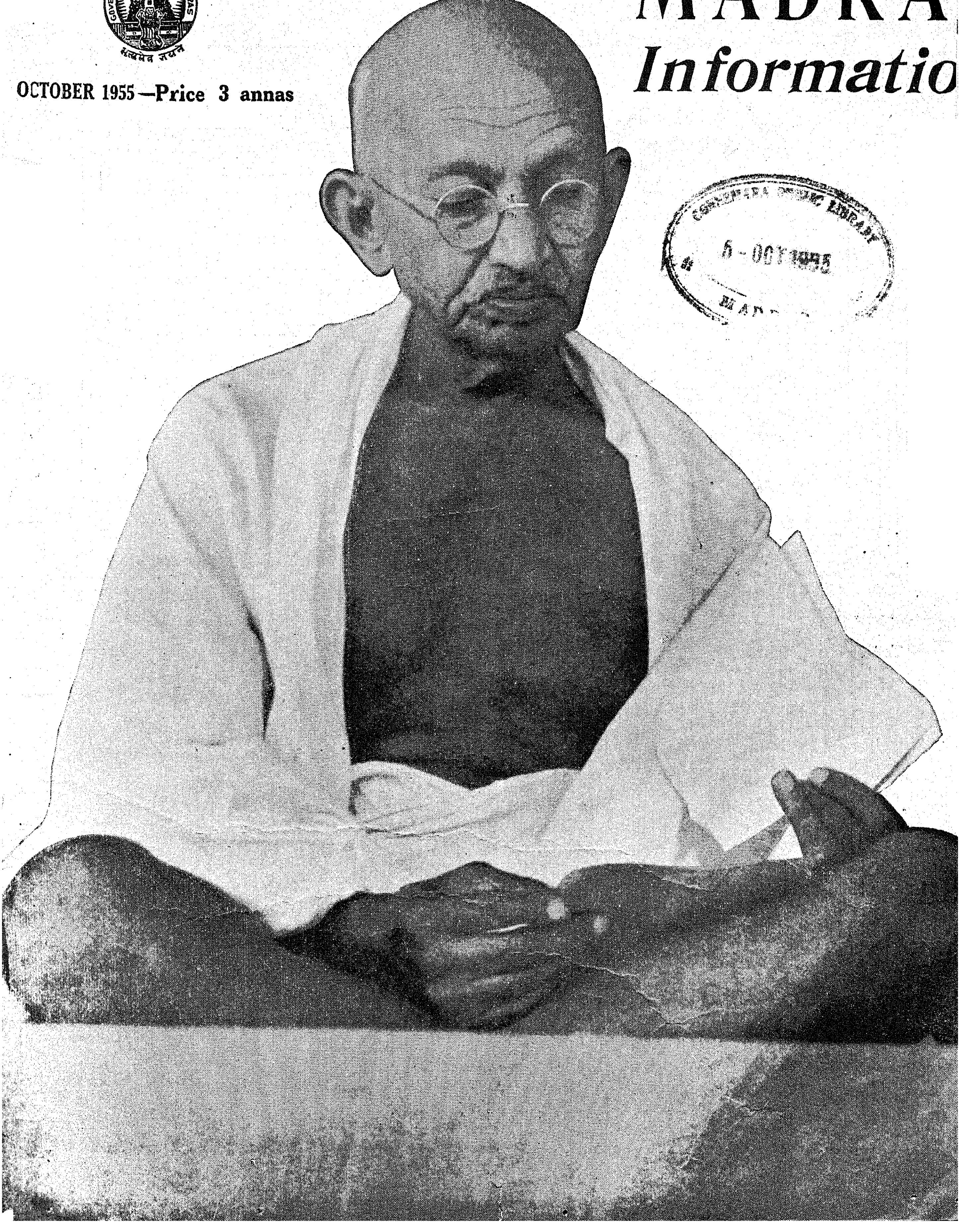
MADRA
Informatio

OCTOBER 1955—Price 3 annas

5 - OCT 1955



ORIENTAL
GOVT. SECURITY LIFE ASSURANCE CO. LTD.
(Established in 1874)

First name in Indian Insurance for the last 80 years
TRANSACTING
all classes of life assurance and annuities

ORIENTAL
FIRE & GENERAL INSURANCE CO., LTD.
(Established in 1947)

TRANSACTING
Fire, Marine, Motor, Accident, also specializing in Engineering and Machinery Erection Insurance

Life business in Force exceeds Rs. 206 Crores

Assets exceed Rs. 75 Crores

If you would like to know how you can participate in the profits of both the Oriental Life and the Oriental Fire and General, please write to P.O. Box No. 148, Bombay.

INDIA'S LEADING INSURANCE COMBINE

ORIENTAL GOVT. SECURITY LIFE ASSURANCE CO. LTD.
ORIENTAL FIRE AND GENERAL INSURANCE CO. LTD.
HEAD OFFICE : ORIENTAL BUILDINGS, BOMBAY-1
BRANCHES AND AGENCIES THROUGHOUT INDIA AND THE EAST.

Telegrams : "RANGAVILAS" Telephone : 17 & 817

SRI RANGAVILAS

Ginning, Spinning and Weaving Mills, Ltd.

PEELAMEDU : COIMBATORE : SOUTH INDIA

(INCORPORATED IN 1922)

SPINDLES - - - - - - 31,020

LOOMS - - - - - - 88

SPINNERS OF SUPERIOR KINDS OF YARN

From 2s to 80s Counts and
Weavers of Gada and Dhoties

Managing Agent: G. N. VENKATAPATHY

Madras Information

Published every month by the Director of Information and Publicity
Fort St. George

Vol. IX, No. 10 "WE SEEK TO SERVE AND NOT TO COMPETE" October 1955

CONNEMARA PUBLIC LIBRARY
5 - OCT 1955
MADRAS

CONTENTS:

		PAGE
1.	Bapu's Unconditional Love	3
2.	Salvation of the Villager—By Sri G. Venkatachalapathi, Director of Rural Welfare.	4
3.	Khadi Development in Madras State—By Sri S. Swaminathan, Khadi Special Officer.	5
4.	The Agricultural Scene—A Gandhian Assessment—By Sri N. Murugesa Mudaliar, Deputy Secretary to Government, Agriculture Department.	8
5.	Place of Basic Education in Educational Reconstruction	10
6.	Youth Camps and Manual Labour—By Sri R. Parthasarathy, B.A., (Hons.), Assistant Professor of Economics, Presidency College, Madras.	12
7.	Our Legislature: The Budget—By Sri A. J. Sabesan, M.A., Secretary to the Council.	14
8.	Development of Highways in Ramanathapuram District	18
9.	Cinchona Industry in Madras State—By Sri A. Y. Swamy, Director, Cinchona Department.	23
10.	Modern Bengali Literature—By Professor Priya Ranjan Sen	27
11.	Rural Electrification	29
12.	Rural Broadcasts for October 1955	31

OUR THANKS.

Our thanks are due to Sri A. Arunachalam, Advocate, Madras, for the photograph of Mahatma Gandhi reproduced on the cover, and to the "Hindu", Madras, for the photographs of Mahatma Gandhi published in the text.

COTTON YARNS

OF ALL DESCRIPTIONS

FOR HANDLOOM, POWERLOOM & HOSIERY FACTORIES

MADURA MILLS CO., LTD.

Phone: 250 (5 lines) | **MADURAI (South India)** | **Telegrams: "HARVEY"**

MILLS AT

MADURAI, TUTICORIN AND AMBASAMUDRAM.

500,000 Spindles — Counts up to 80s

We Supply:

WARP YARNS, COMBED YARNS, HOSIERY YARNS
CONE, CHEESE AND HANK YARNS
SINGLE AND FOLDED

SPECIALITIES:

Yarns for the Manufacture of

ROPES—HEALDS—CANVAS—TAPE

BELTING DUCK—TYRE CORD FABRIC—SEWING THREAD

MULTI-PLY AND CORD YARNS

Managers:

A. & F. HARVEY, LTD.

PANDYAN BUILDING

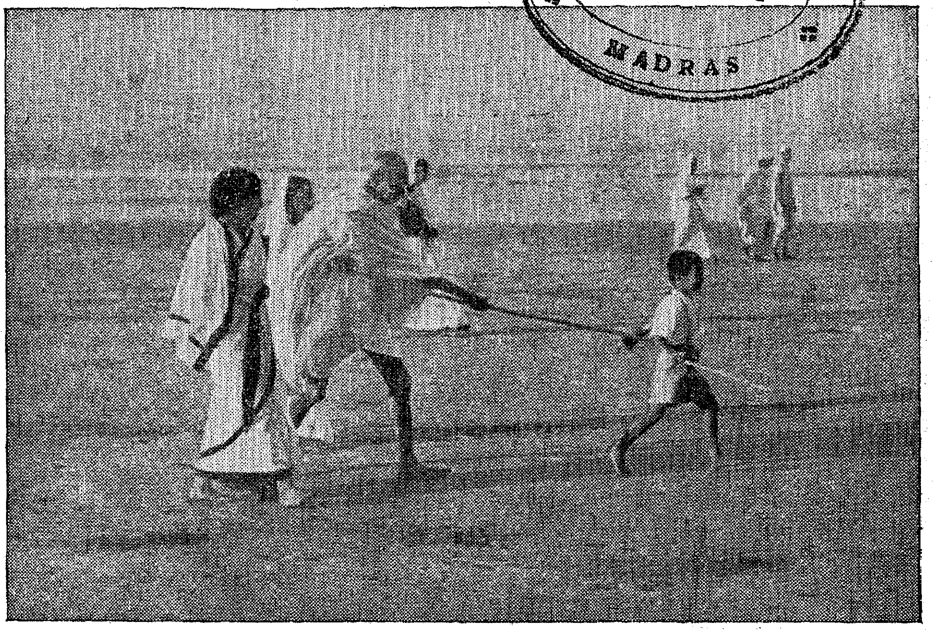
MADURAI

(South India)

Phone: 420 (4 lines) | **Telegrams: "HARVEY"**

Bapu's Unconditional Love

CONNEMARA PUBLIC LIBRARY
5 - OCT 1955
MADRAS



Bapu loved children. And children in turn loved Bapu. Wherever he went, whether be it the East End of London, Bhangi Colony of Delhi, Juhu beach of Bombay, children flocked around him. They felt thoroughly at ease in his presence. Was it, who knows, the divine radar in children that detected the purity and godliness in the Mahatma ?

Bapu's love enveloped all—the inmates of the Sabarmati Ashram, Congressmen and non-Congressmen, Field Marshal Smuts, Churchill and his colleagues, all, all . . . . . ! Bapu never asked before he loved a man : "Do you hold a membership card of the Congress? Do you spin? Do you read the Gita?" No! He just loved. Unconditional love! The more we ponder over this aspect of Bapu, the more we are enthralled. Because, we are all too familiar with the brand of love which stipulates conditions. "Are you with us? Are you within such and such a frontier? Then we love you!" This conditional love at once holds within its fold seeds of hatred. The moment you deviate, move out of the order, or cross the frontier, you are an outsider, an enemy. But Bapu's mind knew no such limitations. Is this unconditional love the answer to the threat of the nuclear age? For, then, the children on the banks of the Yalu, the Yiangtze, the Volga and the Missisipi equally become lovable, equally worthy of being protected from the fumes of the Hydrogen bombs! At least on October 2, will men of goodwill everywhere ponder over this supreme message of the Mahatma?

Sun or rain never prevented Bapu in the discharge of his duties to the Indian people. He knew no rest. Here you see the great Karmayogi walking in torrential rain, indifferent to surroundings, but thinking, thinking of the destiny ahead, the destiny of the millions of his Countrymen whose symbol he had become, of all their aspirations, all their hopes.

Salvation for the Villager

By Sri G. VENKATACHALAPATHI, Director of Rural Welfare

The problems of Rural India are worth repeating any number of times ; because they are so vast and varied, complicated and chronic. They deserve deep study and practical approach from time to time.

It is often said that ' the real India is the Rural India. ' Of the 360 millions of people living in India, 300 millions live in villages and depend on agriculture. Therefore, the main problems of India relate to rural population and agriculture. Any plan of development for the Indian Republic, should necessarily aim at the rehabilitation of rural public.

The Rural Welfare activities, consisting of the Community Projects, National Extension Service, Local Development, Rural Arts and Crafts, etc., aim at the economic uplift of the rural masses. What, then, is ' Rural Welfare ' ? The tiller of the soil should secure better food. Men, women and children in villages should get better clothing. There should be healthy housing facilities for the villagers. The daily necessities of life should be produced and made available to the villagers. In short, every village should live as a happy family unit, with an urge for co-operative endeavour, aiming at mutual welfare and prosperity for all.

Need for subsidiary occupation

There is no use in all villagers depending on agriculture for their livelihood. No doubt, agriculture is the main occupation in rural areas. But, this should not be the only occupation. Agriculturists are engaged for less than eight months in a year in this occupation. The other four months are spent in utter idleness. Under-employment and unemployment rampant in rural areas, have nurtured inertia, disharmony and litigation in those areas. All the hard-earned money they earn during the eight months in the year, is used up for the purchase of their daily necessities such as food products, clothing, etc. Is it not possible for the villager to supplement his income by engaging himself in a subsidiary occupation ? What prevents him from producing yarn for his own clothing ? Especially, those who do not possess sufficient land for cultivation, should make it a point to take to village industries. Unless that is done, there can be no salvation for the villager.

The New Way

The Hiriadka Panchayat in South Kanara District managed to form certain roads in the Panchayat area with the co-operation of the Anjar Villagers' Committee and the Hiriadka Educational Society with very little expenditure from the panchayat funds. The roads formed were about nine miles in length and the estimated value of the work is about Rs. 11,000. It is reported that about 61 volunteers assisted the formation of the roads for a period of three months. The panchayat had only to pay Rs. 250 to the Anjar Villagers' Committee and Rs. 500 to the Hiriadka Educational Society towards the cost of construction of culverts, etc., on the newly formed roads.

Way to Self-sufficiency

No doubt, the villagers produce so many raw-materials like cereals, cotton, groundnut, sugarcane, etc. The villager should see that raw-materials are converted into useful products at the village itself. This requires careful planning for utilizing them in the proper way. Agro-industries should be developed, according to the requirements of local conditions. For example, the cotton produced in the village, instead of being sold away as a raw-material, as it is done today in many villages, can be spun into yarn and woven into clothes, which will be used by the villagers. Oilseeds need not be disposed of as raw materials for reduced prices. Oil can be extracted by the country ' ghani.' By such activities, we can save the trouble of running after oilcakes, found in town mills. At the same time, good edible oil will be made available for the villagers. Gingelly and groundnut oil and cakes can be obtained in plenty, in rural parts. That is how the agro-industries should be fostered.

Unless we do this, Rural India cannot prosper. The villagers will always be at the mercy of a few business and industrial magnates and there will be no end to the economic bondage of the villagers. This state of affairs should change. For, the independent India has resolved to evolve a Socialistic Pattern of Society, based on Gandhian lines, and necessary steps are being taken to achieve that goal. The All-India Khadi and Village Industries Board, the Planning Commission and the Governments—both at the Centre and in the States—have given due importance to the planned development of the village industries in the Second Five-Year Plan. It is left to the people in rural areas to utilize the opportunity offered to them, to raise their own standard of living. The technical guidance and voluntary assistance in this direction, will always be offered by the Development staff in rural areas.

5 - OCT 1955
MADRAS

Khadi Development In Madras State

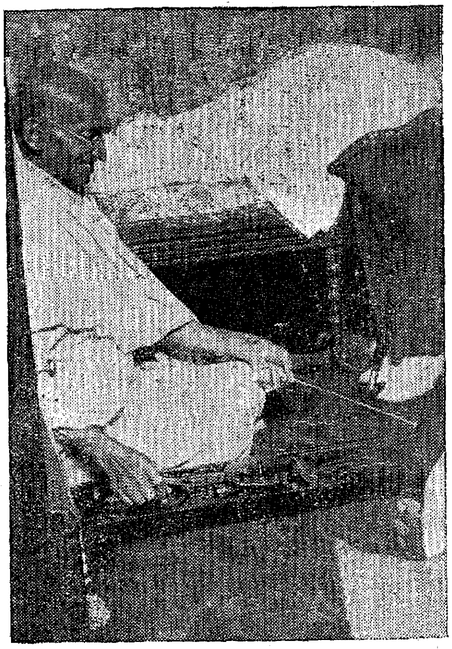
By SRI S. SWAMINATHAN, Khadi Special Officer

In a letter, dated February 15, 1922, Gandhiji wrote : " Of all my outward activities I do believe that the spinning wheel is the most permanent and the most beneficial. I have abundant proof now to support my statement that the spinning wheel will solve the problem of the economic distress in millions of Indian homes, and it constitutes an effective insurance against famine." Again, in the issue of " *Young India*," dated 4th September 1924, Gandhiji wrote : " The spinning wheel for us is the foundation for all public corporate life. It is impossible to build any permanent public life without it. It is the one visible link that indissolubly binds us to the lowest in the land and thus gives them a hope." Khadi work, therefore, formed an important plank in Gandhiji's programme.

The Government of Madras following the high ideals set by the " Father of the Nation", framed in 1946 the khadi scheme to make the villages in this State, as far as possible, self-sufficient economic units. In accordance with Mahatma Gandhi's advice, it was decided, to begin with, that this scheme should be introduced in certain selected centres where khadi had already made substantial progress under the All-India Spinners' Association and in which, therefore, it was hoped that the self-sufficiency ideal would be attained very quickly. It was proposed to extend the scheme gradually to other areas. The scheme was thus conceived in two parts, viz., intensive and extensive.

Intensive Khadi Scheme

Brief history of the khadi work in the State : The centres selected for the intensive part of the scheme were three in the Tamil Nad, viz., Avanashi, Vellakoil, Chinnasalem, one in Kerala, viz., Payyanur and three in Andhra, viz., Guruvareddipalem, Kota Uratla and Erragondapalem. The centres were taken in or about January 1947.



THE PICTURE of an epoch !

The immediate objective of the scheme was to arrange for the production of khadi in each of the centres sufficient to make available to the local population supplies at the rate of 20 yards for an adult and 10 yards for a child per annum. It was proposed to achieve this by securing at least one efficient spinner from each family residing in the centre. Provision was made for supplying Charkas to new spinners at cost price. The spinners were to be encouraged to grow their own cotton with a view to make them self-sufficient in respect of cotton also ultimately, but provision was made to procure and stock cotton in the centres and supply to the spinners at cost price till such time as they were able to make their own arrangements. The authorities in charge of the scheme were required also to take steps to increase the weaving capacity of each village, so that the ideal of getting all the yarn spun in a village woven into cloth in that village itself might be reached as soon as possible.

The Centre Khadi Committees and the Village Khadi Committees constituted under the scheme were charged with the duty of carrying on intensive propaganda in the centres to create public opinion in favour of khadi and also to enlist the necessary spinners by house-to-house propaganda. A paid staff was also appointed to assist the committees in their work. The day-to-day administration of the centres was left to be supervised by the Regional Secretaries of the All-India Spinners' Association, who were appointed to be Honorary Regional Khadi Officers in their respective regions. The All-India Spinners' Association furnished the majority of the personnel required for the staff and even the few outsiders who were recruited were selected by the Honorary Regional Khadi Officers.

But owing to differences between the All-India Spinners' Association and the State Government that arose later, the All-India Spinners' Association withdrew their co-operation and the centres were thenceforward worked by the Government.

Though originally it was the expectation that the khadi produced in the centres would be consumed by the local population, in March 1948, the Government decided that all Government departments should use khadi and khadi only. This decision was entirely based on the considered view of the Government that the use of khadi would have a unifying influence and would be the best expression of the homage to the memory of Gandhiji.

Brighter Outlook

The outlook for khadi is, therefore, very much brighter now. The Planning

Commission has recognised it as an important village industry deserving to be developed. An All-India Khadi and Village Industry Board has been set up by the Central Government. There is also State Khadi and Village Industry Board functioning. The Government of India departments and the State Government departments are placing huge orders for the supply of khadi for the use of their departments. Excepting a few departments, all the rest have to use khadi only for their departmental purposes. The excepted cases are also slowly being reduced in number. The All-India Khadi and Village Industry Board is drawing up plans for the Second Five-Year Plan Period for greatly increasing the production and for expanding the market. To achieve these ends, the Board has been announcing several concessions from time to time. The following are the concessions among others now in vogue :—

1. Grant of capital expenditure as loan for opening of new sales emporia in big cities to serve as sales centres and for printing, dyeing, embroidery and tailoring activities.

2. Grant of a rebate of three annas per rupee on the retail khadi sales to the consumer.

3. Grant of a subsidy to recognized Khadi producing institutions to the extent of 6¼ per cent of their retail Khadi sales subject to the maximum of Rs. 2,000.

4. Grant of loans to recognized institutions for financing production and sale of khadi.

5. Grant of a subsidy to recognized Khadi producing institutions to the extent of 6¼ per cent of their value of production subject to a maximum of Rs. 2,000.

6. Grants for holding Khadi and Gramodyog Exhibitions on an All-India, provincial and district scale.

7. Concession on distribution of implements and accessories in the shape of a subsidy equal to 50 per cent of the cost.

8. Grant of 50 per cent of the weaving charges or five annas per square yard up to the maximum of 20 square yards a year to the self-spinners to get their yarn woven.

9. Training in salesmanship of Khadi and holding courses.

Development Programme

The State Government have also recently decided to take the following measures for developing the production of khadi in the Government Centres so as to double it with a view to cope with the increased demand for it :—

1. Opening of 35 additional visiting centres attached to the various existing sub-centres.

2. Appointment of eight Additional second grade assistants and eight additional boy assistants.

3. Opening of four additional sub-centres attached to the existing centres.

4. Opening of a new centre at Kuruvikulam with three sub-centres.

5. Opening of two independent sub-centres at Rajapalayam and Vedaranyam.

6. Employment of two Khadi Inspectors and Khadi designers.

7. Opening of a Government factory for manufacturing charkas and instruments.

8. Purchase and sale of silk and other special varieties in Government sales depots.

9. Opening of three more sales depots at Mangalore, Kumbakonam and Cuddalore.

10. Functioning of all sales depots as centres for the purchase of yarn also.

11. Appointment of separate staff for running the sales depots.

12. Continuance of payment of commission to selling agents.

13. Payment of commission on sales effected to All-India Khadi and Village Industry Board and other certified institutions.

Improvement in Technique

The State Government are also planning on a large scale to improve the khadi technique by doing research work, impart sound knowledge in khadi work by giving special training to those who take it up, increase the facilities for propaganda and marketing, etc.

The expenditure and receipts under the scheme from its inception are given below :—

Year.	*Gross expenditure.*	*Deduct receipts.*	*Net expenditure.*
	RS.	RS.	RS.
1946-47	1,60,072	23,155	1,36,917
1947-48	14,69,291	6,44,344	8,24,947
1948-49	13,36,241	8,01,311	5,34,930
1949-50	14,83,774	12,87,708	1,96,066
1950-51	17,21,058	17,60,083	− 39,025
1951-52	43,45,233	33,84,625	− 9,60,608
1952-53	39,34,572	29,80,405	− 9,54,167
1953-54	21,02,412	24,31,278	− 3,28,866
1954-55	30,83,952	24,21,132	6,62,820

The following are the figures of production of Khadi :—

	Cotton distributed.	*Yarn purchased from spinners.*	*Khadi production.*	
			On Government account.	*By self spinners on subsidy basis.*
	LB.		YDS.	YDS.
From the inception of the Scheme till December 1949.	415,716	645,189 lb.	1,722,279	863,607
In 1950	136,702	272,809 ,,	634,344	269,370
In 1951	570,755	553,794 ,,	1,078,712	386,911
From 1st January 1952 to 31st March 1952.	132,386	1,977,507 hanks.	372,055	31,027
In 1952-53	571,499-2	8,845,305 ,,	1,705,551	72,911
In 1953-54	598,612-12	3,680,808 ,,	612,628	52,059-10
In 1954-55	(Figures are not yet ready.)			

Extensive Khadi Scheme

The Extensive Khadi Scheme was sanctioned in May 1949. It was introduced in the first instance in 19 selected Firkas. The scheme provided for the introduction of 1,000 charkas a year in each of the 19 selected Firkas. Under the scheme, arrangements were also made for supplying charkas at a concessional price and for the supply of cotton and instruments. Subsidy was also paid to self-spinners as under the Intensive Khadi Scheme. The intention was that the Extensive Khadi Scheme should pave the way for introduction of the Intensive Khadi Scheme in due course. The scheme was extended to 36 more Firkas in the year 1950–51. The services of the Rural Welfare Officers were availed of to implement the scheme. With the formation of the Andhra State, the scheme was in force in 33 selected firkas and parts of firkas administered by 13 Rural Welfare Officers assisted by the Khadi workers and Gramasevaks in the Madras State. Consequent on the merger of the Rural Welfare Scheme in the National Extension Service in October 1953, the working of the scheme has been entrusted to the Block Development Officers-in-charge of the National Extension Service Blocks of the respective Firkas. At present the scheme is in vogue in 26 blocks.

Recently the Government have introduced a comprehensive Khadi Scheme on the lines of the Extensive Khadi Scheme in the Community Project and Community Development blocks. This is just being put into operation. The general outline of the scheme is as follows :—

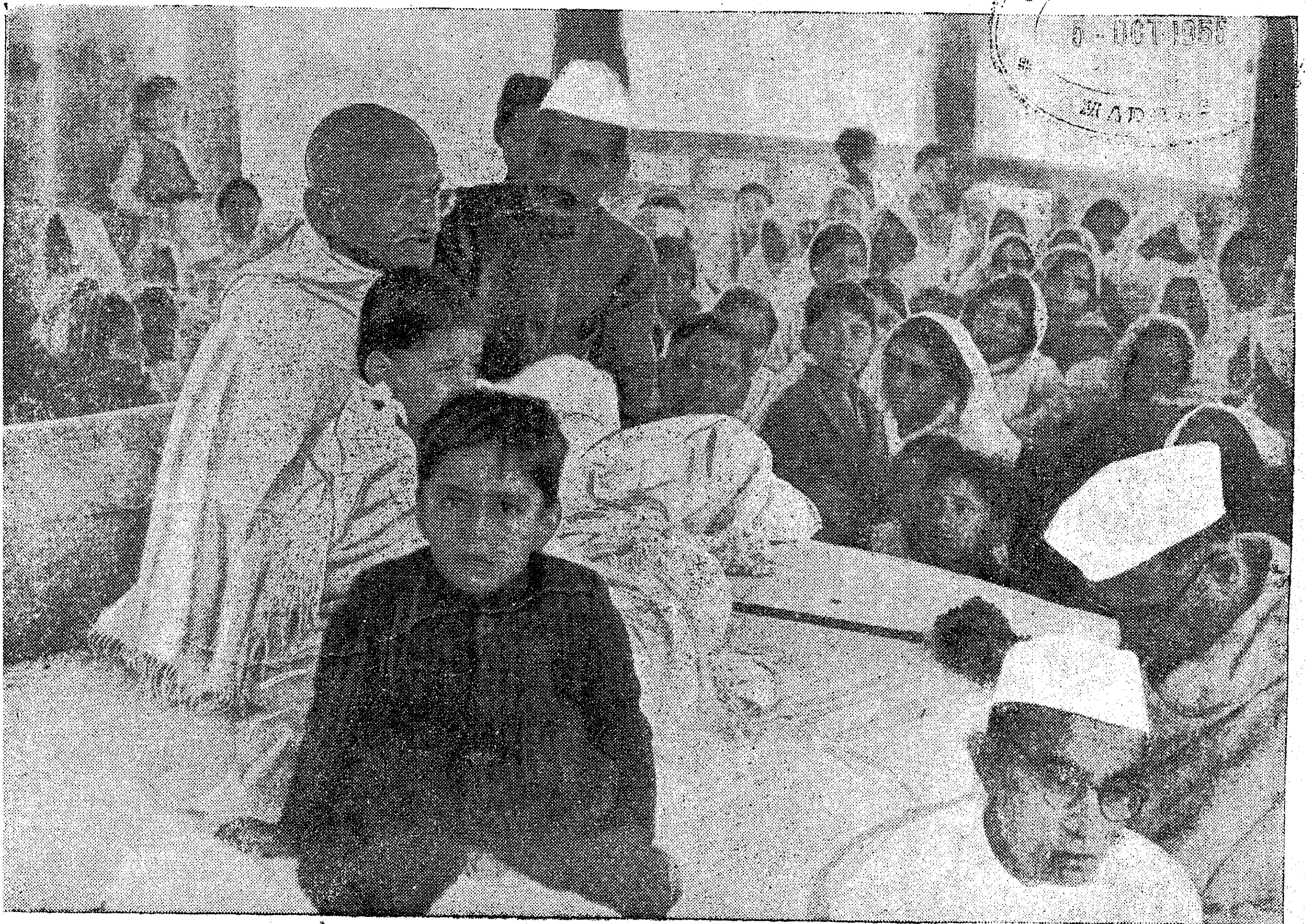
1. Charkas will be introduced at the rate of 1,000 for every block in a year at subsidized rates.

2. Cotton will be purchased and supplied at cost price.

3. Yarn produced will be purchased by the Government from the spinners at the rate fixed under the Government Intensive Khadi Scheme from time to time and transferred to the nearest Intensive Khadi Centre.

4. Ten carding machines and slivering sets will be supplied free of cost so each block.

CONNEMARA PUBLIC LIBRARY
5 OCT 1955
MADRAS



HERE YOU SEE BAPU in the Prayer Hall of the Harijan Colony in Delhi. By his side you see a great and trusted Colleague, careworn by the weight of the epic struggle—today our beloved and revered President !

3 OCT 1955

The Agricultural Scene—A Gandhian Assessment

By Sri N. MURUGESA MUDALIAR, Deputy Secretary to Government, Agriculture Department

Village the Pivot

On Gandhiji's birthday, let us make an assessment whether the agricultural developments are moving towards the ideals set by him.

To Gandhiji agriculture was not a mere question of raising of crops but was part of an integral concept of village development. To the most careful student of agriculture it would be apparent that the problem of agriculture is vastly more economic and human than merely technological. Gandhiji therefore frequently wrote and spoke about village uplift and poverty of the peasants. He said, "To serve our villages is to establish Swaraj. Everything else is but an idle dream." When Swaraj was in sight, he turned his attention more and more to problems like soil fertility, organic manuring and cattle improvement. In all his thoughts, the village was the pivot for emancipating the poverty stricken masses of India. "To-day, the villages are dung heaps. To-morrow they will be like tiny gardens of Eden where dwell highly intelligent folk whom no one can deceive or exploit." That was his hope. Are we working for the fulfilment of that hope ?

It used to be the fashion to consider that the villagers' methods of farming were outmoded. Gandhiji did not entirely share this view. "The Indian villagers' method of farming was certainly not bad," he wrote, "many are decisive that he has a workable knowledge of agriculture which is not to be despised." The villagers' inability to adopt better methods is largely economic. His margin of income is so low that he could not find the investment to use better seeds, improved implements or manures. Things have fortunately changed a little during the past few years since Independence. Under the stress of a serious food shortage, the villagers have been liberally helped by the State with subsidies and loans and provision of supplies and services. A slight advantage in increased prices has also improved the situation.

Irrigation

The most basic factor in agricultural improvement is irrigation. "The need for providing irrigation facilities for all the villagers cannot be emphasized too greatly. This is the foundation upon which agriculture depends for its progress, in the absence of which it remains a gamble. A drive for sinking wells, enlarging and dredging tanks and building canals has to be launched. The power engines used in rice and flour mills now can be acquired by the Government to pump up water from tubewells". These are views endorsed by Gandhiji. Madras was the first to realize the advantage of providing small-scale irrigation facilities dispersed throughout the State. A campaign for sinking new surface wells or deepening old ones by giving subsidies to the villagers was organised. About fifty thousand wells were sunk or deepened and they served to tide over the drought years and saved the villagers from total loss of crops and unemployment.

Many small tanks have been restored and it is still on the State's programme to renovate more tanks, to desilt them and to dig more tanks, particularly in the ex-zamindari areas. Power engines and electric motors have been supplied to the villagers on hire or on easy instalment basis to lift water for irrigating their crops. Over 30,000 motors and engines are now under operation and over 3,000 have been given on hire. Wherever these are in use, the fields put on a green look as crops could be raised almost throughout the year. Small filter point tubewells have been brought into vogue and to-day there are probably more than 1,000 such tubewells in many districts.

Manure

Gandhiji placed the greatest importance on utilization of night-soil and compost manuring of lands. In fact, intensive work was done in this respect by his disciple Mira Ben. "This organic manure ever enriches, never impoverishes the soil. The daily waste turned into compost returns to the soil in the form of golden manure causing a saving of millions of rupees and increasing manifold the total yield of grains and pulses. In addition, the judicious use of waste keeps the surroundings clean. And cleanliness is not only next to godliness, it promotes health." So he wrote in 1947. Compost manuring has been made popular in this State. Almost all Municipalities and many major Panchayats are manufacturing this manure and making it available to cultivators. The cost of transporting manure has not made it however popular in some places.

There is however no need to depend on Panchayats to make the manure or to pay for transport if Gandhiji's simple advice is heeded. He said, "the chief thing to remember is not the various methods of disposing of refuse so much as the necessity of burying all the refuse for the double purposes of promoting the villagers' health and their material condition through the better yield of their crops which the manure must produce." This is an observation which we have not followed so far. He said : "By this method the cost of digging is lessened and that of removal avoided altogether or certainly lessened. Add to this the fact that excreta is turned into manure in almost a week's time for the reason that the bacteria which live within six or nine inches of the surface of the earth and the air and the rays of the Sun act upon the excreta and turn them into sweet manure much more quickly than when the refuse is buried deep." We should emphasize the advantages of covering excreta in the villages where composting in pits

is not followed. There is much practical wisdom in this hint. "If we all become scavengers," he exhorted, "we would know how to turn what to-day is poison into food for plant life."

Gandhiji favoured the collection of bones which are being wasted now in the villages and their being put to use as manure. The bones should be charred a little and crushed locally in village chakkis into bone meal and applied to the soil. The bones contain phosphate much needed by the soil. To give only nitrogen manuring is, so to say, to give it only one lung and subject it to galloping consumption. We should lay more stress on phosphates and bones are easily available in the villages.

Goseva

To Gandhiji, the condition of the village cattle reflected the prosperity of farming in the village. "Without model cattle, we cannot have a model village" he said. He advocated the bullock for agricultural operations and for village transport and also stressed the importance of proper maintenance of milch cows and the duty of *goseva*. In a talk to villagers, he said, "you have to find out whose animals are the best to discover how he manages to keep them so well. You will find out which was giving the largest amount of milk and discover how he keeps her and feeds her. You may fix some prize for the best bullock and the best cow in the village." Cattle Shows are held in many places in this State but the idea of village shows and competitions must be popularized. This should form an important item in the Agricultural Week Celebrations that we are organizing during the Pongal Week.

As regards rural industries, Gandhiji had a firm faith in spinning. "The charka supplemented the agriculture of the villages and gave it dignity. For the charka included all the anterior and posterior industries, ginning, carding, warping, sizing, dyeing and weaving. These in turn kept the village carpenter and blacksmith busy" he explained. Spinning is no doubt emphasized in our rural development programmes but its character as a cognate industry to agriculture is yet to be emphasized.

Gandhiji had the instinct of a practical farmer and was not dismayed by problems that confronted us during the food shortage. Some one had complained that the land at the disposal of Talimi Sangh at Sevagram was of poor quality and hardly fit for agriculture. Gandhiji brushed aside the objection and said, "You do not know the kind of land we had to begin with in South Africa. But by dint of application we were able to convert it into a fruit orchard. If I were in your place, I would not use the ploughs to begin with. I would arm our children with the hoe and teach them to use it effectively. It is an art. The bullock power can come later. Similarly, I would not like you to be deterred by the poor quality of the soil. A thin top layer of compost can enable us to grow many a useful vegetable and pot herb. A beginning can be made at once by converting night-soil into manure by shallow trenching system. The conversion does not need more than a fortnight. Every pint of water both from bathing and ablutions or from the kitchen should be turned into the backyard vegetable beds. Not a drop of water should be allowed to be wasted. Greens can be grown in earthen pots and even in discarded old tins. No opportunity should be neglected however trifling. The cumulative result of the practice is on a nation-wide scale will be colossal." These hints could not have come better from an extension worker.

Happily Gandhiji's ideas of village workers have found some fulfilment in the ideals set before the Gramasevaks trained for our rural development programmes. He repeatedly stressed the importance of body labour and would not believe that money alone would transform the village. "You cannot bring a model village into being by the magic wand of money", he said.

A new social order

Gandhiji conceived land tenure reforms as a means of ensuring, what he called, a non-violent rural economy. "The real implication of equal distribution", he said, "is that each man shall have the wherewithal to supply all his natural needs and no more. To bring this ideal into being, the entire social order has got to be reconstructed. A society based on non-violence cannot nurture any other ideal." Once, he said, "Real socialism has been handed down to us by our ancestors who taught that all land belongs to Gopal. Where then is the boundary line ? Man is the maker of that line and he can therefore unmake it."

In his dream of village Swaraj, Gandhiji envisaged that "every village's first concern will be to grow its own food crops and cotton for its cloth. It should have a reserve for its cattle, recreation and play grounds for adults and children. Then if there is more land available, it would grow useful money crops." It is a simple and sane formula for land management for village planners. We are trying to make the villages self-sufficient but considerably far remains to be done.

Gandhiji advocated co-operative farming. In an article entitled "Individual or collective ?" he put his point in the following words: "I firmly believe that we shall not derive the full benefits of agriculture until we take to co-operative farming. Does it not stand to reason that it is far better for a hundred families in a village to cultivate their lands collectively and to divide the income therefrom than to divide the land anyhow into a hundred portions ? What applies to land applies equally to cattle." These ideas about collective action and Community endeavour are being encouraged to some extent in our Community Development and National Extension Blocks and in Land Colonization Societies but the success is meagre.

Gandhiji regarded the import of food as colossal waste probably as much as the drain of India's wealth by the purchase of Manchester cloth which aroused his feelings many years earlier.

Role of the Cultivator

Gandhiji had the highest esteem for the cultivator. "Years ago I read a poem in which a peasant is described as the father of the world. If God is the provider, the cultivator is His hand. What are we going to do to discharge the debt that we owe to him ?" he asked. To-day after the travails of drought and famine, the role of the cultivator in the nation's economy is more vividly realized.

The agricultural scene is slowly moving, though not as fast as we could wish towards the ideals of Gandhiji. More than the outward forms of improvements and reforms, all activities should be imbued with the spirit and feeling of Gandhiji. Particularly in this State where the possibilities of agriculture are immense there is need to keep in view the social objectives of agriculture as the provider of all good and as the basis of a durable economy as envisaged by the greatest man of our times.

CONNEMARA PUBLIC LIBRARY
5 - OCT 1955
MADRAS

Place of Basic Education in Educational Reconstruction

Basic Education, as conceived and explained by Mahatma Gandhi, is essentially an education for life and, what is more, an education through life. It aims at creating eventually a social order free from exploitation and violence.

This article is based on a Working Paper which was submitted by Sri K. G. Saiyidain, Additional Secretary, Union Ministry of Education, for the consideration of the Standing Basic Education Committee.

In this feature are explained the concept and technique, implications and salient features of Basic Education.

The term 'Basic Education' has been interpreted and sometimes misinterpreted, in a variety of ways. This is to some extent understandable because it is a comparatively recent development and its concept and technique are still in the making. It seems necessary, therefore, to state clearly what we mean by Basic Education.

Broadly speaking, the concept of Basic Education is the same as defined in the Report of the Basic National Education Committee (The Zakir Hussain Committee) and elucidated by the Central Advisory Board of Education. It is clear that the basic principles and techniques, as made out in that Report, should guide and shape educational reconstruction in India. So far as the provision of eight years of compulsory universal schooling, and the use of the mother-tongue as the medium of instruction, are concerned, there is no difference of opinion about them. They have now come to be universally accepted and need no further elucidation, except in so far as it may be necessary to stress the intrinsic wholeness of the entire period of basic education, covering the Junior as well as Senior basic grades. The other implications and features of Basic Education that need to be clarified and stressed are the following:—

Basic Education, as conceived and explained by Mahatma Gandhi, is essentially an education for life and, what is more, an education through life. It aims at creating eventually a social order free from exploitation and violence. That is why productive, creative and socially useful work in which all boys and girls may participate, irrespective of any distinction of caste or (class) is placed at the very centre of Basic Education.

Importance of Basic Crafts

The effective teaching of a basic craft, thus, becomes an essential part of education at this stage, as productive work, done under proper conditions, not only makes the acquisition of much related knowledge more concrete and realistic but also adds a powerful contribution to the development of personality and character, and instils respect and love for all socially useful work. It is also to be clearly understood that the sale of products of craft-work will meet some part of the expenditure incurred on running the school or that the products will be used by the school children for getting a mid-day meal or a school uniform or help to provide some of the school furniture and equipment.

As there has been controversy and difference of opinion regarding the position of craft work in basic schools, it is necessary to state clearly that the fundamental objective of Basic Education is nothing less than the development of the child's total personality which will include productive efficiency as well. In order to ensure that the teaching of the basic craft is efficient and its educative possibilities are fully realised, we must insist that the articles made should be of good quality, as good as children at that stage of their development can make them—socially useful and, if necessary, saleable.

Productive Aspect

The acquisition of skills and the love for good craftsmanship have deeper educative significance than merely playing with the tools and raw materials which is usually encouraged in all good activity schools. This productive aspect should in no case be relegated to the background as has been usually the case so far, because directly as well as indirectly, efficiency in the craft practised undoubtedly contributes to the all-round development of the child. It sets up before children high standards of achievement and gives them the right kind of training in useful habits and attitudes like purposeful application, concentration, persistence and thoughtful planning.

While it may not be possible to lay down specific targets for productivity at this stage, it should be the teacher's endeavour to explore its economic possibilities fully with the emphatic stipulation that this does not in any way conflict with the educational aims and objectives already defined. However, it has to be stated that, in the upper classes of junior basic schools and in the senior basic schools, it should not be difficult for States to lay down certain minimum targets of production in the light of carefully assessed experiences.

Liberal Approach

In the choice of basic crafts which are to be integrated into school work, we should adopt a liberal approach and make use of such crafts as have significance from the point of view of intellectual content provide scope for progressive development of knowledge and practical efficiency. The basic craft must be such as will fit into the

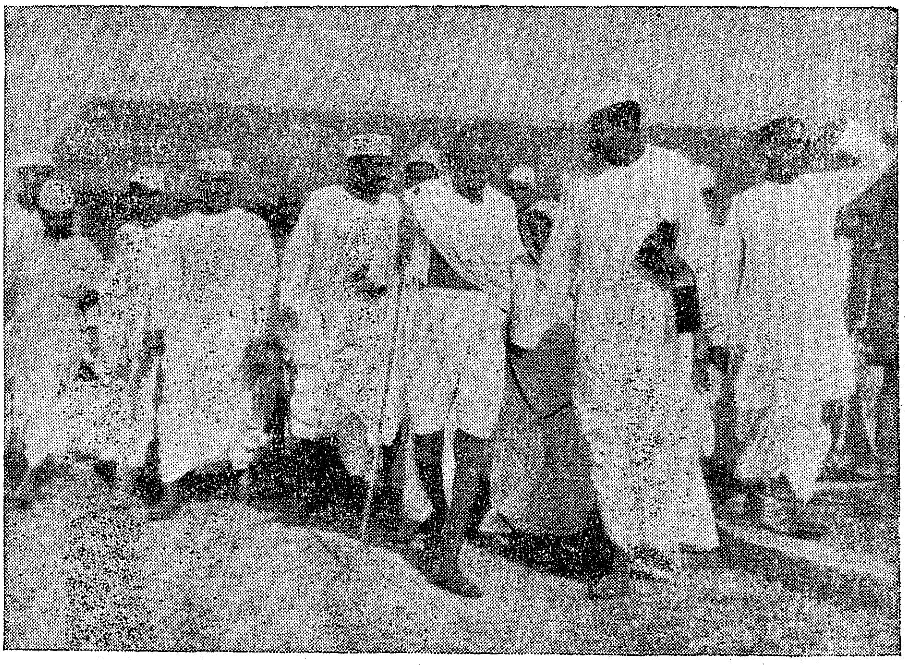
natural and social environment of the school and hold within it the maximum of educational possibilities. The idea that has been wrongly created in the minds of some people that the mere introduction of a craft in a school, e.g., spinning can make it a basic school does grave injustice to the concept of Basic Education.

In Basic Education, as, indeed, in any good scheme of education—knowledge must be related to activity, practical experience and observation. To ensure this, Basic Education rightly postulates that the study of the curricular content should be intelligently related to three main centres of correlation, viz., craft work, the natural environment and the social environment. The well-trained and understanding teacher should be able to integrate most of the knowledge that he wishes to impart to one or the other of these centres of correlation, which form important and natural facil of interest for the growing child. If he is not able to do so, it either means that he lacks the necessary ability or that the curriculum has been burdened with items of knowledge which are not really important and significant at that particular stage.

It should also be realised, however, that there may be certain items in the syllabus which cannot be easily correlated directly with any of the three above centres. In such cases, there should be no objection to these being taught according to the methods of teaching adopted in any good school. This means, that, even in the case of such lessons, the principle of interest and motivation and the value of expression-work will be utilised. In any case, forced and mechanical 'associations' which pass for correlation in many schools should be carefully avoided.

Place of Books

The emphasis on productive work and crafts in basic schools should not be taken to mean that the study of books can be ignored. The basic scheme does not postulate that the book is not the only or the main avenue to knowledge and culture and that, at this age, properly organised productive work can in many ways contribute more richly both to the acquiring of knowledge and the development of personality. But the value of the book, both as a source of additional systematized knowledge and of pleasure cannot be denied and a good library is as essential in a basic school as in any other type of good schools.



STAFF IN HAND he walks . . . and memories surge through our minds of marches, struggles, the trek in Noakhali . . .

School and Community

The basic scheme envisages a close integration between the school and the community so as to make education as well as the children more social minded and co-operative. It endeavours to achieve this, firstly, by organising the school itself as a living and functioning community, with its social and cultural programmes and other activities—secondly, by encouraging students to participate in the life around the school and in organising various types of social service to the local community.

Students, self-government is another important feature in Basic Education which should be envisaged as a continuous programme of training in responsbility and in the democratic way of living. In this way, the basic school not only helps in cultivating qualities of self-reliance, co-operation and respect for dignity of labour but also becomes a vital factor in the creation of dynamic social order.

Basic Education should no longer be regarded as meant exclusively for the rural areas. It should be introduced equally in urban areas both because of its intrinsic suitability and also to remove the impression that it is some kind of inferior education designed only for the village children. For this purpose, necessary modifications may have to be made in the choice of basic crafts for urban schools and even in the syllabus but the general ideals and methods of Basic Education should remain the same.

Some Production Figures

The production of automobiles in the country during the period January-March 1955 rose to 5,357 from 4,601 in the preceding quarter and 3,785 in the corresponding quarter of 1954.

There were 31 sugar factories employing 33,900 workers in the country in 1932 and the numbers rose to 170 and 91,997 respectively in 1953.

India's exports to the Soviet Union increased from Rs. 1·15 crores in 1953-54 to Rs. 2·11 crores during 1954-55, while her imports from that country increased from Rs. 59·7 lakhs to Rs. 1·61 crores during the same period.

CONNEMARA PUBLIC LIBRARY
5 - OCT 1955
MADRAS

Youth Camps and Manual Labour

By Sri R. PARTHASARATHY, B.A. (Hons.), Assistant Professor of Economics, Presidency College, Madras

The idea of social service camps for University students and scouts originated from the Ministry of Education, Government of India, as part of an educational programme designed to change the outlook of the student population and make it more conscious of its duties towards the country at large. Broadly speaking, the objective of the youth camps are, (1) to impress upon the minds of the students, the dignity of manual labour; (2) to provide an opportunity for the students to live in typical rural surroundings and thereby acquire an insight into rural problems; (3) to mingle freely among the villagers and explain to them in a telling way about village co-operation, sanitation and the need for their participation in community project.

It is stated that during the past ten months, since the scheme was launched, 404 camps have been conducted and about 40,000 youths have participated all over the country. In Madras State, about 22 camps were conducted in the months of April and May of this year and over 2,000 students may be said to have participated. Planning and conducting of Social Service Camps are much more difficult than the organization of N.C.C. camps. The N.C.C. has a tradition in training the cadets in aspects of manual labour. Further, it has a ready administrative machinery for planning the camps right from inauguration. On the other hand, social service camps are only recent essays for infusing a new spirit into the non-N.C.C. students. The machinery for planning these camps is still in the making. Further, their activities are diversified. While targets of work are no doubt a consideration for social service Camp Officers, their main duty is to remove the antipathy of the urbanised students towards the village and bring about a large measure of sympathetic understanding of rural India.

Work in Chingleput District

The writer has had the opportunity of conducting social service camps in three villages in Chingleput district. A remarkable feature of this district is that, a favourable psychological background has been created for the social service campers by its energetic Collector who has a flair for innovation. The 'New Look' campaign and the drawing up of wall-charts in strategic places in every village are the fruits of his originality. Students whom I accompanied were assigned by the Community Project authorities, the following pieces of work :-

1. Mud-plastering.
2. White-washing.
3. Painting.
4. Decoration.

Campers were divided into nine batches, and each batch was entrusted two mud-houses for imparting the 'New Look.' The emphasis throughout was on community outlook and team work than on individual distinction. Initially, the campers were beset with certain difficulties. While the Block Development Officer and his team of Officials were ready to help with tools, materials and technical advice, some of the villagers offered mild resistance. Some of them felt that each student was paid by the Government and as such, he must do the work himself. Some of the campers complained to me that the inmates in certain houses did not offer any co-operation. For instance, water for mixing up the mud was not readily supplied, nor even vessels with which campers could fetch water. In some of the houses, the campers were subject to a regular commentary which brought out the distrust of some of the villagers of all schemes of rural development. Some of the villagers felt that it was unworthy of college students to take up any type of manual labour. The campers had to explain to the villagers that they were no superior human beings and that, as fellow countrymen, they were anxious to know about the problems of the villagers. After exercising a good deal of patience and tact, the campers succeeded in weakening the resistance of the villagers in restoring an atmosphere of co-operation. In majority of the households there was a keen desire to give a new look to their thatched mud-huts. In some of the tiled houses, the inmates supplied their own lime and painting and requested the campers to white-wash and decorate the walls of their houses. On the whole, the students derived great joy from their work.

Quick Attainment of Proficiency

The remarkable feature of the 'New Look' campaign is that any novice can pick up sufficient skill within a few days in aspects of manual labour. For instance many of the campers, who were just freshers, attained proficiency in mud-plastering within a few days. Success of mud-plastering depends on the softness of the mud, as well as the fine proportion in which mud is mixed up with water. Before commencing mud-plastering, the camper has to find out how rough and uneven the mud-wall is. Sprinkling of water is necessary for preparing the wall to take in as much of soft mud as possible. Once the wall has taken in sufficient mud, the subsequent task is to make it smooth and uniform. On the whole, mud-plastering is more strenuous a job than white-washing or painting. The difficulty is all the more increased in villages where soft mud is not readily available.

White-washing was the most popular type of manual labour among the freshers in the camp. Success of white-washing is determined by the proportion in which lime is mixed with water and the way in which the first coating is imparted. As mud-walls take in more of line, care has to be taken to

give a thin coating at the first instance. Once it dries up, the camper goes in for a second-coating. Some waste of lime is inevitable, when the students are in the process of picking up the technique of white-washing.

Painting the doors and windows is a semi-skilled job, and here again it becomes difficult for a novice to practise economy in the use of paint. Decoration of the walls with pieces of flower designs and letter painting is a skilled job in the 'New Look' programme. Campers who had a flair for drawing were put in charge of decoration. The best piece of painting and decoration came off during the last week of the camp.

Socio-Economic Survey

Without prejudice to manual labour, social service camps can conduct socio-economic survey of nearby villages. Such a survey would provide a great insight for the students into the socio-economic conditions of the rural set-up and incidentally provide a useful training in the collection of vital social and economic data. Conducted under qualified officers, the socio-economic surveys can provide a revealing background in which local and State Governments can plan their development schemes. The writer had conducted an intensive socio-economic survey of three villages in Chingleput district. The questionnaire utilized for the survey related to the size of the family, the number of dependants, size of the property, income from the property per annum, land revenue, monthly consumption of food-stuffs, amount of debt, interest charges, subsidiary occupations and infantile mortality. The response of the villages, after an initial distrust, turned out to be whole-hearted and the writer had a remarkable experience throughout the different stages of investigation.

New Spirit of Service

In conclusion, the usefulness of social service camps can be reiterated. Such camps evoke a new spirit of service and self-sacrifice on the part of the campers. They help to narrow down the gulf between the town-dweller and the rural folk. Antipathy is replaced by better understanding. The resistance of the village to any new suggestion is gradually replaced by the offers of co-operation to the campers. The camps in brief provide for a useful interaction between sensitive minds and hard-set hardy villagers.

(*Continued on page* 30)

DR. A. LAKSHMANASWAMI MUDALIAR, Vice-Chancellor of the Madras University, inspecting some of the exhibits at the Medical Exhibition at the Madras Medical College.

CONNEMARA PUBLIC LIBRARY 6 - OCT 1955 MADRAS

Our Legislature :

The Budget

By Sri A. J. SABESAN, M.A., Secretary to the Council

Derivation of the word

"BUDGET" comes from the French "bougette", a diminutive of the old French *bouge,* meaning a small leather bag or wallet and has by custom, come to mean the Chancellor of Exchequer's annual estimate of the revenue and expenditure with statement of intentions regarding taxation, the "bundle of papers carried in his red budget box" and "opened out" to the House on the appointed day. This statement of the estimated receipts and expenditure of the State in respect of every financial year is referred to in the Constitution as the "annual financial statement." It is not however a mere "document containing a preliminary approved plan of public revenues and expenditure" but a report on the administration of the financial affairs of the Government during the last completed year, the condition of the Treasury at the time and the programme of work for the coming year, with proposals as to the financing of such work. On its being approved by the Legislature and assented to by the Governor under the procedure prescribed for the purpose, the Executive is authorized to run the machinery of the State within the financial limits laid down in that Statement.

In the words of a French Legislator,

"The pilot in charge of steering a vessel is the only competent judge of the position and of the spread he has need to give his sails, because he alone is posted in such a way as to know the force and the direction of the winds and currents, which may hinder or delay his movements."

Based upon this principle, the foundation of any sound system of public finance, the responsibility for the preparation of the budget estimates in this State rests with the Executive, viz., the Governor acting on the advice of his Ministers on the analogy of the Sovereign in England.

The Legislative Councils established by the Indian Councils Act of 1861 had no voice in the financial administration of the country nor had they any opportunity to make any observations on the financial proposals of the Government except when a new tax was imposed. In the absence of new taxation, the Budget was merely published in the form of a pamphlet and no discussion took place on it. Lord Dufferin recommended in his Minute dated 6th November 1888 that an opportunity should be given to the Legislative Council for a full, free and thorough criticism and examination of the financial policy of the Government. The Indian Councils Act, 1892, accordingly gave the Councils the right to discuss the Budget but not to vote on it item by item. The general discussion of the Budget obtaining now as a stage in the Voting of Grants is a relic of those days. The Acts of 1919 and 1935 conceded the right to vote but fettered the powers of the Legislature over the purse in other respects and reserved to the Governor the power to authorize expenditure without legislative sanction to the extent and in the special circumstances stated therein.

Limitations

Our present system of control by the State Legislature over finance is in its essential features similar to the British system which is briefly as follows :—

"The Crown demands money, the Commons grant it, and the Lords assent to the grant; but the Commons do not vote money unless it be required by the Crown ; nor do they impose oraugment taxes, unless such taxation be necessary for the public service as declared by the Crown through its constitutional advisers."

The initiation of policy and the management of details remain with the Governor acting through his Ministers in the House and through the Treasury outside. No Demand for Grant is made except on the recommendation of the Governor. The Legislative Assembly cannot also vote money for any purpose except on the demand and upon the responsibility of the Ministers on the recommendation of the Governor. The Executive Government cannot also raise money by taxation, borrowing or otherwise without the authority of the Legislature. This power to grant money in the Legislature which includes both the raising of money and authorizing of expenditure belongs to the Legislative Assembly. The Legislative Council cannot initiate or alter a grant.

The revenues are derived under the various financial enactments made by the Legislature from time to time and are in force without a specific annual authorization. A separate financial Bill is introduced in respect of each new proposal for taxation and the discussion and voting on the Bill do not form part of the Budget proceedings. All revenues received by the Government, all loans raised by it by the issue of treasury bills, loans or ways and means advances and all moneys received in repayment of loans form one consolidated fund entitled "the Consolidated Fund of the State." Out of this fund are paid the moneys charged on the Consolidated Fund and the supplies granted by the Legislative Assembly for the current year. All other public moneys received by or on behalf of the State is credited to the public account of the State.

In order to meet unforeseen expenditure in the service of the State, a contingency Fund in the nature of an imprest called the "Contingency Fund of the

State of Madras " has been esbtablished under the Madras Contingency Fund Act, 1950, consisting of a sum of one crore of rupees withdrawn from the Reserve Fund of the State and placed at the disposal of the Governor of Madras with authority to make advances therefrom for any unforeseen expenditure pending regularization by a law passed by the Legislature. As often as any such expenditure is regularized by law as stated above, the amount of the advance is recouped to the Fund.

A distinction is made in the estimates of expenditure embodied in the annual financial statement between expenditure charged on the revenues and other expenditure. " Charged " expenditure means the expenditure which is the first charge on the Consolidated Fund and does not require the vote of the Assembly, namely, the emoluments and allowances of the Governor, the Speaker and Deputy Speaker of the Legislative Assembly, the Chairman and the Deputy Chairman of the Legislative Council, Judges of the High Court and Members of the Public Service Commission, debt charges and other such expenditure declared by the Constitution or by the Legislature of the State by law as charged upon the Consolidated Fund of the State. The figures and details representing them in the estimates are printed in italics. Other items of expenditure are submitted to the vote of the Legislative Assembly in the form of demands for grants (corresponding to the Vote of Civil Estimates in the House of Commons). Each Demand contains a statement of the total sum required and the details by which the grant will be accounted for by the departments concerned.

Under the former system there was no provision for Votes on Account as in the United Kingdom by which grants are voted in advance for a part of the financial year pending the completion of the ordinary procedure prescribed for the voting of such grants. The whole budget debate was so arranged that the voting on Demands for Grants can be completed before the next financial year. Now that Votes on Account have been introduced by the Constitution, there is not the same urgency to finish the budget debate before the next financial year begins. But this new procedure was resorted to so far only twice, viz., before the Constitution of the new and enlarged Legislature under the Constitution and on the eve of the separation of the Andhra State.

Budget Day

" Budget Day " is one of the big occasions of the year in the Legislative Assembly and is awaited with intense interest throughout the State inasmuch as close secrecy is imposed upon the contents of the Budget Speech and there is much speculation as to what the Budget proposals would be and whether there would be a deficit or surplus. The disclosure of the Budget proposals in the Press in advance of its delivery to the House gave rise to a question of privilege in the Legislative Assembly on the 30th June 1952 but the Speaker held that the Member had not made out a *prima facie* case.

The Budget is laid before both the Houses of the Legislature, by the Finance Minister in the Assembly and by the Leader of the House in the Council, though there were occasions when it was presented by the Finance Minister in both the Houses. (In England the presentation of the Budget is made only to the House of Commons and not to the House of Lords.) The practice is to present it to the Assembly before it is laid before the Council. On one occasion, the Budget was presented to the Council after it was voted upon by the Assembly and the Government justified the departure from the usual practice by the special circumstances of the case.

On a day appointed by the Governor for the purpose, after question time, the Finance Minister rises in his place in the Assembly amidst crowded galleries and an animated House and says :

" I rise to present to the House the Revised Estimates for the current year . . . and the Budget Estimates for the nex year . . . "

He then deals in detail with the revised estimates of revenue and expenditure of the year about to close, the estimates for the coming year, variations in the ways and means estimate of the year about to close from the plan expounded at the previous budget session and the ways and means of the coming year and commends the Budget to the acceptance of the House. In so doing, he draws special attention to the implementation of the policies and programmes of the Government already made and gives a rough indication of what the Ministry hopes to do in the coming year. There is no discussion of the Budget on the day on which it is presented to the Legislature.

In England the charge on the public revenues (any proposal involving expenditure or tax) is first considered in a Committee of the whole House (all the members of the House of Commons converting themselves into a Committee without the Speaker in the Chair and presided over by the Chairman of Ways and Means). The Chancellor, in fact, " opens " his Budget in the Committee of Ways and Means and not in the full House. The proposals for raising money are considered in the Committee of Ways and Means (Committee dealing with the ways and means of raising money for the public services) and the estimates of expenditure in the Committee of Supply (Committee on supply of money needed for the public services) and their resolutions reported to the House. On its agreeing with the Committees in the said Resolutions, they are incorporated in Bills which, after passing through all the stages in both the Houses and assented to by the Crown, constitute the law by which the charge is authorized—the Finance Act (authorizing the levy of taxes), the Consolidated Fund Act (empowering the Treasury to issue the money required out of the Consolidated Fund) and the Appropriation Act (authorizing the appropriation of money from the Consolidated Fund as set out in the schedule thereto).

Procedure in this State

The Budget in this State is dealt with by the Assembly in two stages namely: (1) General Discussion and (2) Voting on Demands for Grants. There is only a general discussion in the Council. The Speaker in consultation with the Leader of the House and the Business Advisory Committee fixes and appoints sufficient number of days for each of these stages subject to a maximum of eight days for the general discussion and twenty days for the voting of demands for grants in the Assembly. The Chairman in consultation with the Leader of the House allots the number of days not exceeding five for the discussion of the Budget in the Council.

On the days appointed for the general discussion, the Assembly and the Council discuss the budget as a

whole or any question of principle involved therein and the attack by the Opposition is mainly directed against policy rather than against expenditure. This is the occasion on which the revenue estimates of the Government are criticised. The discussion covers the whole field of administration but no motion is moved at this stage nor does the discussion go into many details. The debate is however important, for it furnishes the Legislature with the only opportunity of criticising the estimates charged upon the Consolidated Fund of the State, limited no doubt to bringing home to the Government their responsibility in the matter. This marks an improvement on the procedure in England where there is no opportunity every year of criticising or reviewing the administration of the charged services. The speeches at this stage also enable the Government "to feel the pulse of the House" in regard to the Budget proposals. The discussion concludes with the reply by the Finance Minister at the end.

Discussion on Demands

At the next stage the demands of the Government for supply are presented to the Assembly in the form of a series of motions. The Speaker in consultation with the Leader of the House and the Business Advisory Committee fixes the time to be allotted for the discussion of each demand and also determines the order in which the demands are to be taken up, subject to change of course under the rules on a motion accepted by the House. On these days, no other business except the asking and answering of questions is taken up before 5 p.m. except with the consent of the Speaker.

Each Demand is introduced by the Minister in charge of the subject or by any one authorized by him in the following form:

"On the recommendation of His Excellency the Governor I move that the Government be granted a sum not exceeding Rs. . . . under (Demand VIII—IRRIGATION)."

In case it is a Vote on Account, he says—

"On the recommendation of His Excellency the Governor, I move that the Government be granted a sum not exceeding Rs. . . . in advance in respect of the essential expenditure for a part of the financial year . . . under the head (Demand VIII—Irrigation)."

The Minister who moves a demand for grant normally makes a statement explaining the policy underlying the demand. Any member then moves a motion standing in his name to reduce the demand by a specified sum.

"Mr. Speaker, Sir, I move" he says, "That the allotment of Rs. . . . for under (Demand VIII—Irrigation) be reduced by Rs. . . ."

They are usually token motions for a uniform sum of Rs. 100 and for Re. 1 in case the allotment under the Demand is only Rs. 100.

Motions to increase or alter the estimate or the demand or for raising a question on that portion which is not subject to actual reduction by the Assembly are not admissible. In giving notice of these motions members are asked to state also the objects for which the motions are tabled, so as to facilitate their arrangement in the list of cut motions and also enable the Ministers to be prepared with their replies. The motions are taken up for discussion in the House in the order in which they appear in the Order paper but the Chair is not bound to call every member who had given notice of cut motions or in the order in which their names appear in the list. When all of them are token motions, the practice is that only one motion is moved in respect of each Demand and other members speak on it, though in exceptional cases a member desiring to press a specific grievance is allowed to move a separate cut motion. Motions are to be moved only by the Member who has given notice of the same. There is also no right of reply but the Speaker can allow the mover or any member in his discretion to ask the Minister for clarification of points in his reply.

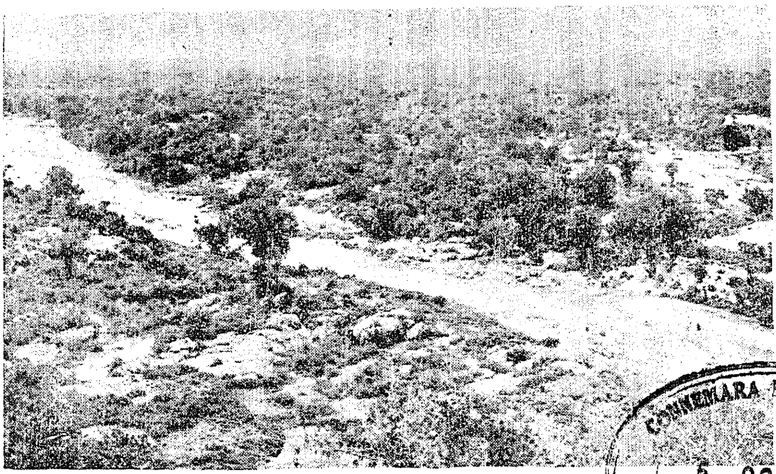
Opportunity for Discussion

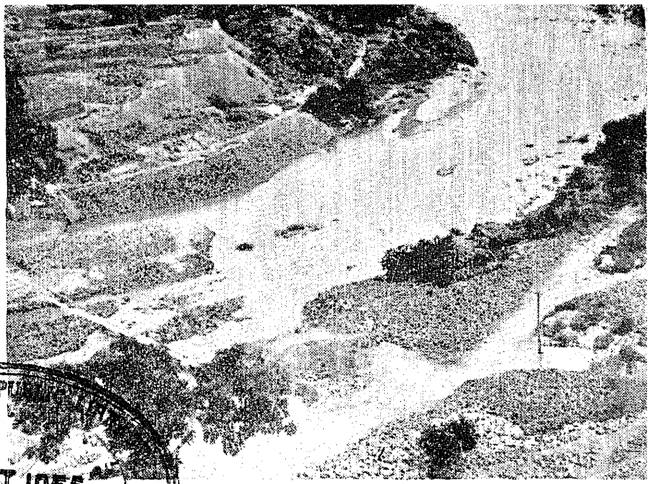
The debates on the estimates and the Governor's Address are the two occasions when the private member is given sufficient opportunities for discussing the policy and activities of the Ministers and the departments of the Government. The subjects discussed range from lack of irrigation facilities in a district and water-supply in a municipality or complaint against some aspect of the public service to major questions of policy as for instance, Education, Prohibition, Five-Year Plan, etc. It is at this stage that the visitor feels the truth of the maxim, "Redress of grievances must precede supply." Motions for the reduction of demands with the specific purpose of expressing want of confidence in the Ministry were also moved in the old Legislative Council on 18th March 1929 and 19th March 1936. The debate however must be confined to the administrative actions of the Departments of the Government for which Ministers are responsible and be relevant to the subject of the Demand under discussion. Matters involving legislation cannot be raised on an estimate nor could legislation be urged. The discussion on statutory bodies over which the Ministry has a limited control (e.g.) the Madras University, should not extend beyond the policy of the Government in administering the Act. Remarks on the conduct of persons in public service must be restricted to their official conduct. Criticism of the conduct of Judges or the decisions of a judicial Court and personal reflections on the conduct of the Governor are not also allowed.

Voting of Demands

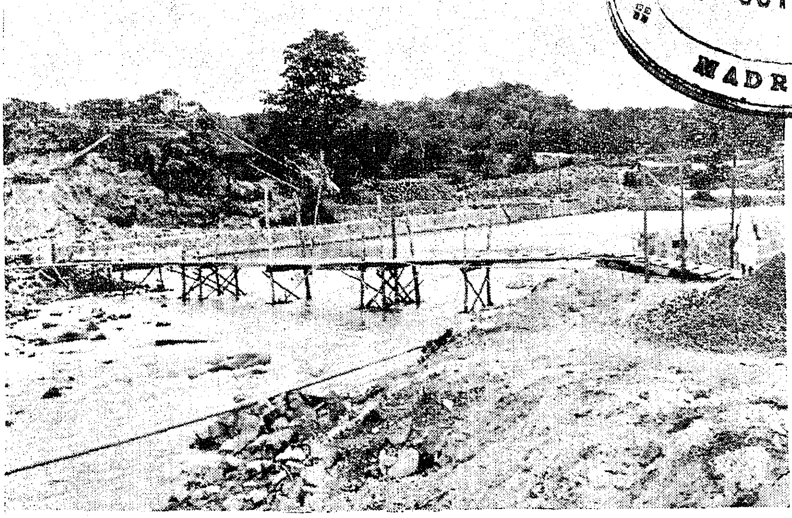
"The most important factor in the process is" as stated by May, "that Government responsibility for the estimates has long been taken to cover eve y detail of every vote so that the reduction of an estimate would be regarded as a major defeat probably involving the resignation of the Cabinet." In replying to the debate on a demand, therefore, the Minister refers to the points raised by the Members and assures them of further consideration by the Government where necessary and thereby tries "to win a majority for his proposal." The motion for reduction is usually withdrawn with the leave of the House on the assurances given by the Minister. But members not satisfied with the Minister's reply press it to a vote and at times to a division. After it is disposed of, the question regarding the demand for grant, or the demand for grant as reduced in case a cut motion is accepted by the House, is put to the vote of the House. On the last of the days allotted for the voting of demands, all the outstanding demands are put to vote including the motion for reduction of the grant, if any, under discussion.

In the years prior to the commencement of the Constitution a resolution of the Legislature approving the



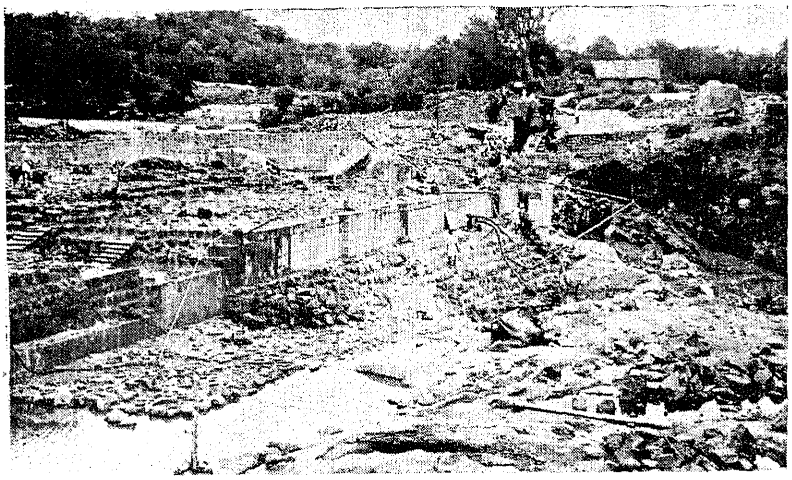


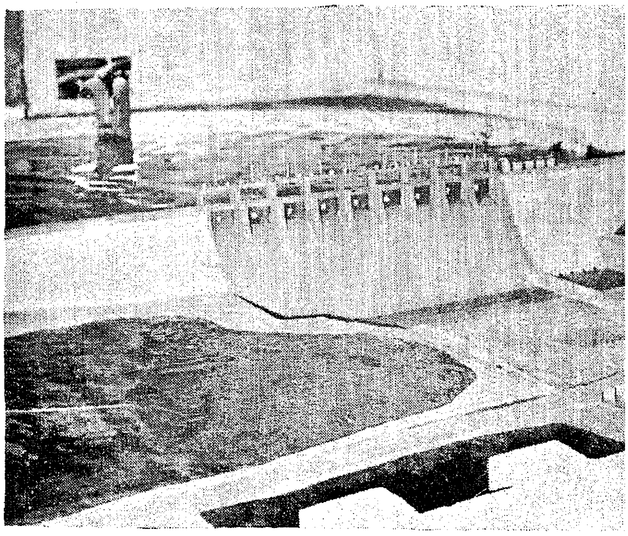
CONNEMARA PU...
5 - OCT 1956
MADRAS

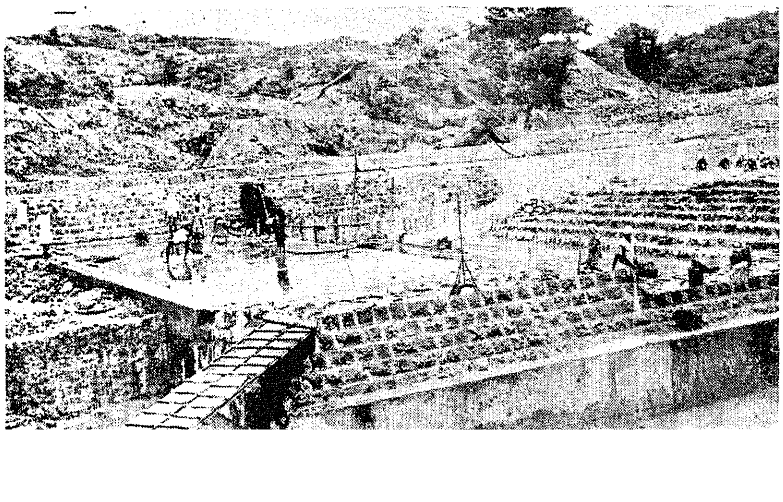


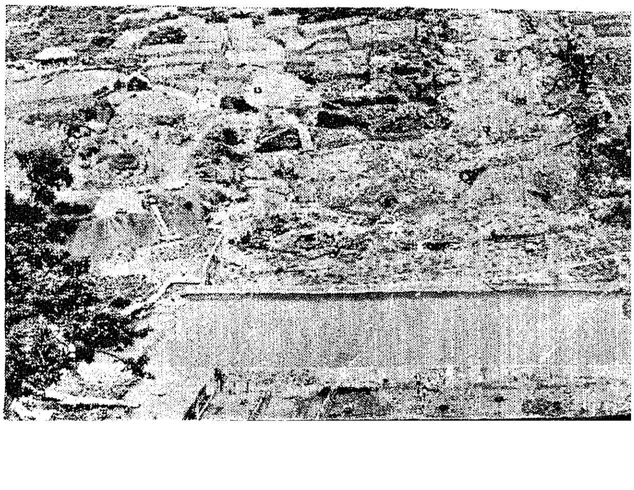
SATHANUR PROJECT

The Sathanur Project in North Arcot dist: is progressing according to schedule. ' pictures show the progress of work in various sectors of the project. The pro; when completed will irrigate 16,700 acres new land, and also assure supplies to existing wet land. (*Below*) A model of the da

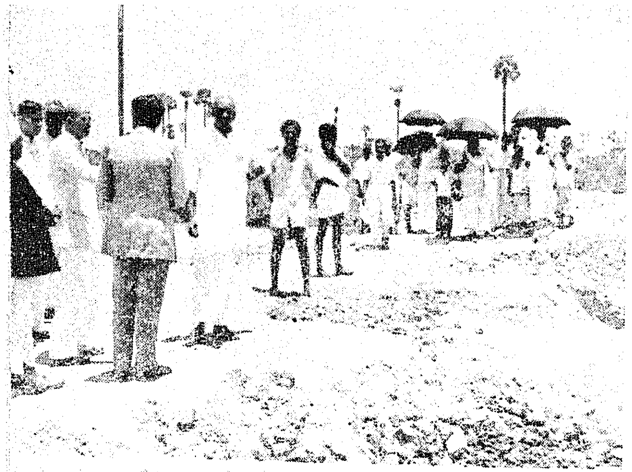


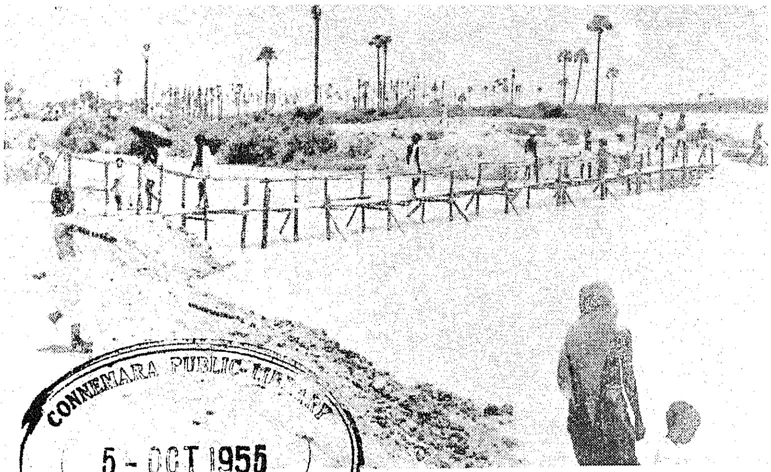




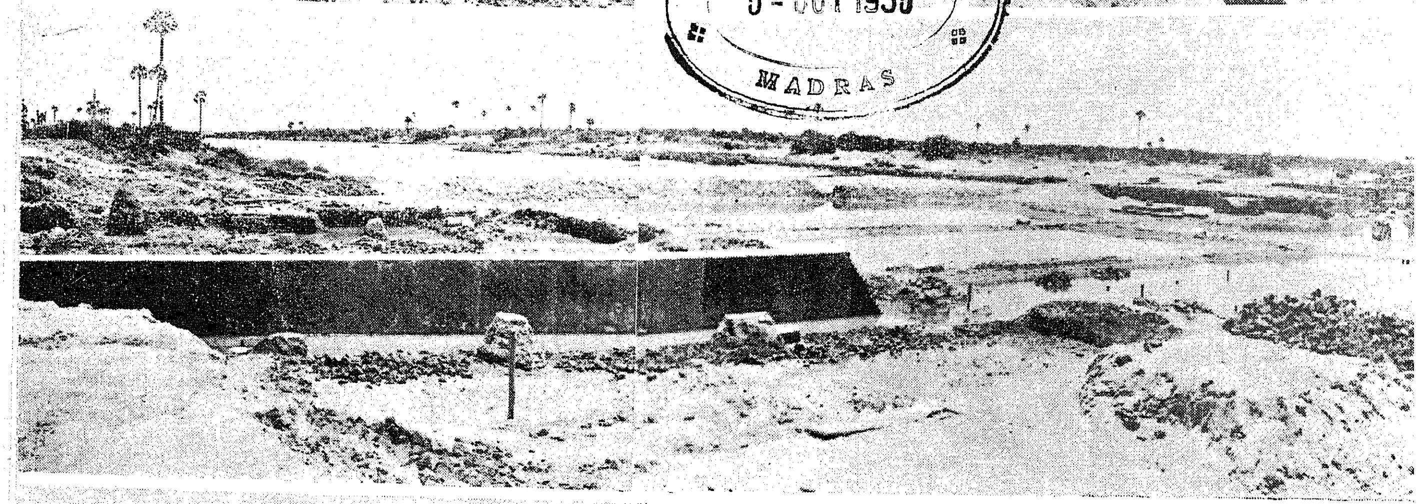


He Gave us Light!





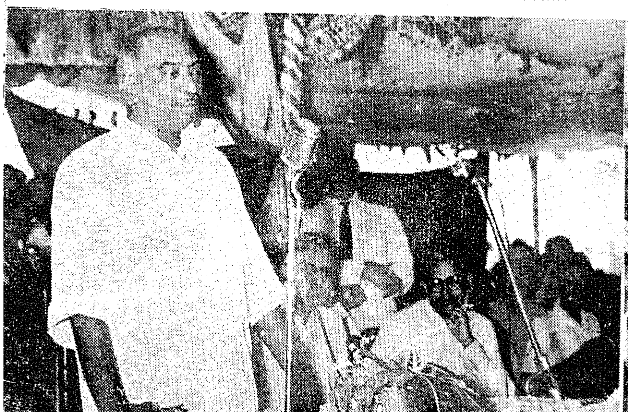
CONNEMARA PUBLIC LIBRARY
5 - OCT 1955
MADRAS

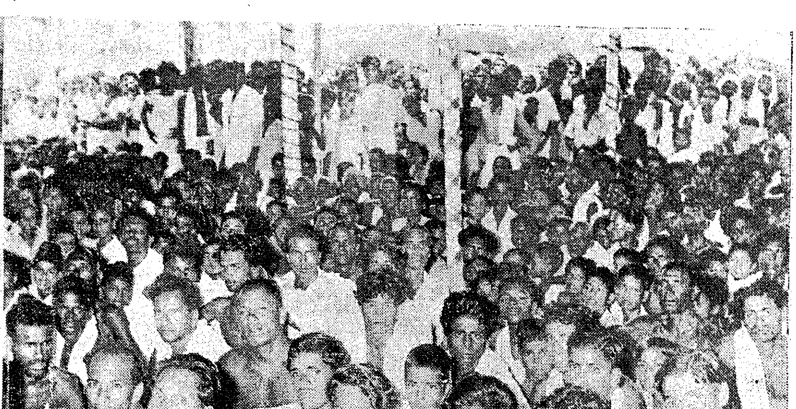


CONNEMARA PUBLIC LIBRARY
5 - OCT 1955
MADRAS

MAHARAJASAMUDRAM ANICUT AT PATTUKKOTTAI

Sri K. Kamaraj, Chief Minister, recently opened the Maharajasamudram Anicut at Pattukkottai in Tanjore district. He also inspected the Maharajasamudram bed dam under construction.





Demand was sufficient legal warrant for the appropriation. But at present, following the practice in the Mother of Parliaments, the money required to meet the grants voted by the Assembly and the expenditure charged on the Consolidated Fund are incorporated in a Bill called the Appropriation Bill which after going through the regular stages of a Bill is sent to the Governor for Assent. The procedure relating to Bills applies to Appropriation Bills except that no amendments can be proposed to any such Bill which will have the effect of varying the amount or altering the destination of any grant so made or of varying the amount of any expenditure charged on the Consolidated Fund of the State. The Appropriation Act assented to by the Governor authorizes the appropriation out of the Consolidated Fund of the State for the year within the limits set out in the Schedule thereto.

Supplementary Demands

Where the sums originally voted are not sufficient to meet the expenditure, or when a need had arisen during the current financial year for expenditure upon some new service not contemplated in the annual financial statement for that year, resort is had to supplementary or additional demands for grants. A demand for excess grant is made to make good any money spent on any service during a financial year in excess of the amount granted for that service and for that year. The procedure relating to demands for grants applies to these demands also except that the discussion is confined to the specific objects for which the demands are presented. The Constitution also provides for:

(1) Vote of Credit, viz., a grant for meeting an unexpected demand upon the resources of the State when on account of the magnitude or the indefinite character of the service the demand cannot be stated with the details ordinarily given in an annual financial statement; and (2) an exceptional grant (i.e.) demand made to meet an expenditure which forms no part of the current service of any financial year.

" It would not be fair to the people " as T. G. B. Cocks says "if their representatives made over a great sum of money for which the people have worked so hard without seeing that it has been properly spent." There is therefore "an inquest before the money is granted and then another after it has been spent." The accounts of expenditure are maintained in the same form as the estimates. The finance accounts (based on payments into and issues out of the treasury) and the Appropriation Accounts (a more detailed record of final payments by the departments) are audited by the House's "expert critic," the Comptroller and Auditor-General, and his report to the Governor is placed on the table of the Legislature. These documents are scrutinized by a Committee of the Legislative Assembly known as the Committee on Public Accounts. The function of this Committee may be broadly stated to be that of "generally reviewing the financial operations of the Government for the purpose of determining the fidelity and efficiency with which administrative officers have performed their duties", to see that the funds voted by the Legislature are spent by the executive in the manner intended by the Legislature. The recommendations of the Committee are embodied in a report and presented to the House. The estimates are also examined by a Committee of the House called the Estimates Committee with a view mainly to effect economies, improvements in organisation, efficiency or administrative reform consistent with the policy underlying the estimates and to suggest the form in which the estimates might be presented.

Checks and Balances

To sum up, the financial procedure is a system of checks and balances. The voting of grants by the Legislature, the audit of accounts by the Comptroller and Auditor-General and their review by the Public Accounts Committee and the examination of estimates by the estimates Committee secure the responsibility of the Government to the Legislature, and "the anticipation of criticism exercises a wholesome check on the actions of the Government and tends to maintain honest and pure administration and expenditure by the Departments."

"All undertakings depend upon finance. Hence foremost attention shall be paid to the Treasury" said the Great King-maker Kautilya, better known as Chanakya in his *Arthasastra*. These words are as true today as in the third century before Christ. The State with an unbalanced budget meets the fate of "a family whose outgoings are perpetually bigger than their income" and eventually "sinks into uncomfortable poverty." In administering the finances of a State therefore it is necessary "to strive, to seek, to find" though we may "grow weak by time and fate" and say "all is clear." The keynote to the success in this "national housekeeping", that which makes or mars one's reputation as the Chamberlain to the Government, "the pilot in charge of the vessel," is the

"BUDGET"

Our Central Inset—

The Mahatma taught us the way of attaining Grama Swaraj. It was not a mere economic programme. It was a way of life, a new civilisation. It was a programme for saving society from certain of the evils of industrial revolution. Mahatmaji's ideas, as far as possible, are being put into practice through various programmes that are being sponsored by the Governments, both Union and States. In this page you see a photographic record of the work in our State—Khadi, Harijan Welfare, Cottage Industries, Basic Education, Rural Sanitation and so on. If we succeed, that would indeed be the greatest memorial for the Mahatma who died for us.

5 - OCT 1955 MADRAS

Development of Highways in Ramanathapuram District

Development of Highways is an important item in the overall development of any area. The district of Ramanathapuram, as any other district in the State, is growing and developing. In the second week of September these events took place in that district: (1) opening of the bridge at M. 66/6 of Madurai—Ramanathapuram Road, (2) opening of the Ramanathapuram-Mandapam road, (3) laying of the foundation stone for the bridge at M. 7/1 of Ramanathapuram-Kilakkarai Road and (4) laying of the foundation stones for Vaipar, Uppodai and Arjuna bridges at M. 345/7, 343/7 and 339/4 of N.H. 7 Banares-Cape Comorin road. Shri Shanmuga Rajeswara Sethupathi, Minister for Public Works participated in all the functions. In these pages you read the extracts from the speeches delivered by Sri K. K. Nambiar, Chief Engineer (Highways) on the various occasions.

Roads in Our State

Our State has the largest mileage of surfaced road per square mile of area in our country. The total mileage of all the roads per square mile of area is nearly twice the average of the whole of India.

In our State we have 1,065 miles of National Highways, 1,651 miles of State Highways, 9,117 miles of Major District roads, 5,171 miles of Other District Roads, 9,055 miles of Village Roads, 638 miles of Public Works Department roads and 2,829 miles of Municipal Roads. The total under all these heads is 29,517 miles. Out of this 29,517 miles, 381 miles have been cement concreted, 4,081 miles have been black-topped, 14,254 miles have been metalled and remaining 10,801 miles are unmetalled. These figures indicate various mileages of roads in our State as on 31st March 1954.

The Post-War Road Development Scheme drawn up for this State, will increase the total mileage to 30,154. It is planned to provide a feeder road to every village with a population of over 500. In the First Five-Year phase of the above programme, 75 miles of road have been cement concreted, 66 miles provided with black-top surface, 1,003 miles metalled and 1,043 miles of new roads formed. Besides these a number of bridges both major and minor costing nearly a crore of rupees have been completed.

When the National Five-Year Plan was inaugurated, that part of the first five-year phase of the Post-War Road Development Programme which had not been executed, was included in the National Plan which provides for a well-balanced programme of road and bridge construction. We are now in the last year of the First Five-Year Plan and I am glad to say that our achievements have been satisfactory. Such of the works which could not be executed under this programmee have been included in the Second Five-Year Plan.

Coming in particular to the bridge which is to be thrown open for traffic to-day, I may tell you that this work being on a National Highway is fully financed by Government of India. It will be appropriate in this connexion if I refer to the various works of the Government of India for the improvement and maintenance of National Highways and also for the construction, reconstruction and maintenance of bridges thereon.

1. *National Highway First Five-Year Programme.*—The programme drawn up and approved by Government of India provides for the development of National Highways of the State at a cost of Rs. 393 lakhs. Of these 49 are road works and 33 are bridge works. Most of the works are under various stages of execution.

The balance of the First Five-Year Plan estimated to cost nearly Rs. 170 lakhs has been included in the Second Five-Year Plan. The Second Five-Year Plan which is more ambitious than the First is estimated to cost about Rs. 620 lakhs including the above works. It is worth mentioning here that the Second Plan contemplates to construct a bridge costing about Rs. 1 crore over the Pamban crossing.

2. *West Coast Road (Bombay-Cape Comorin Road) Development.*—This is under implementation. Revised programme for the work amounting to Rs. 282 lakhs has been submitted to Government. This consists of (i) 30 bridge works costing Rs. 79·9 lakhs; (ii) 73 improvement works including culverts costing Rs. 194·5 lakhs; and (iii) 4 formation works costing Rs. 7·6 lakhs. Out of these about 30 works costing about Rs. 136 lakhs have been sanctioned and are under execution. It will not be out of place, if I mention here that the Government of India have assumed full financial responsibility for the development of this road with effect from 1st April 1955.

3. *Additional development works sanctioned by Government of India.*—Under this scheme Rs. 145 lakhs have been allotted for various bridge and road works. Of these 5 are bridge works costing Rs. 64·55 lakhs, 6 are improvement works, costing Rs. 18·80 lakhs, 16 are formation and improvement works, costing Rs. 61·30 lakhs. These are of Inter-State importance and for opening up of new areas where rail communication is scarce. Under this scheme, 12 works costing about Rs. 84 lakhs have already been sanctioned.

4. *Central Road Funds State allocation.*—Under this scheme 43 works costing roughly Rs. 66 lakhs were approved. Of these 31 are bridge works costing Rs. 48 lakhs, 12 are road works

costing Rs. 18 lakhs. Out of these, 11 works costing Rs. 16·01 lakhs are already under implementation. Recently the work of constructing a bridge at mile 7/1 of Ramanathapuram-Kilakkarai road has been sanctioned for Rs. 3·76 lakhs.

Second Five-Year Plan

Now I shall give you a brief account of the various development programmes for the State Highways and other roads as envisaged in the Second Five-Year Plan.

The targets proposed are as follows :—

1. Cement concreting 190 miles at a cost of Rs. 1·60 crores.

2. Black-topping 1,530 miles at a cost of Rs. 2·60 crores.

3. Upgrading and new metalling 1,400 miles at a cost of Rs. 2·12 crores

4. Improvement to geometric features at a cost of Rs. 0·40 crore.

5. New formation 5,000 miles at a cost of Rs. 4 crores.

6. Minor and major bridges at a cost of Rs. 5·28 crores.

Speaking of this district there was hardly any good roads as late as the early part of the 18th century. From that time onwards the position seems to have improved gradually. After the formation of Highways Deaprtment, steps have been taken to provide adequate facilities of communication and now there is fair net-work of roads in Srivilliputtur and Sattur taluks and in what is knowns as the " Chettinad Area " in Tiruppattur taluk. However, facilities in other taluks are inadequate. The district has now 1,748 miles of road of all categories of which 34 miles are provided with cement concrete pavement, 235 miles with black-top surface, 736 miles with metalled surfaces and 743 miles are earthen roads. The total length of the roads in charge of Government is 486 miles while 1,046 miles and 216 miles are maintained by the District Board and Municipalities respectively. This district has 0·36 miles of road per square mile of area against the State average of 0·42.

Programme for the District

Now I shall briefly sketch the various road development programmes of this district as envisaged in the different plans formulated.

Under the Post-war Road Development Programmes inaugurated in 1947–48 it was contemplated to cement concrete 192 miles, to provide black-top surface for 129 miles, to metal 1,462 miles, to construct 1,139 miles of road and to construct 43 major bridges and some minor bridges costing in all Rs. 325·26 lakhs. However, the whole programme could not be carried out due to lack of finance and when the National Five-Year Plan was inaugurated in 1951–52, the balance of the Post-War Road Development Programme was carried over.

The important works sanctioned under the First Five-Year Plan are constructing bridges across Uppodai, Arjuna, Vaippar, including the bridge being opened now for traffic. In this, forming a road from Ramanathapuram to Pamban and extending Ramanathapuram-Mandapam road up to Mandapam Dry Dock were also sanctioned. There are other works such as widening the culverts and constructing minor bridges. The total cost of the above works amount to Rs. 42 lakhs.

Works under Central Road Fund Scheme.—Under this head, Rs. 4 lakhs has been allotted by the Government for the construction of a bridge at miles 7/1 of Ramanathapuram Kilakkarai road. Proposals also have been sent for constructing a submersible bridge across Vaippar, Arjuna mettalling Ramanathapuram-Nayanarkoil road and forming road from Ramanathapuram-Mandapam road to District limits.

The Second Five-Year Plan provides for an expenditure of about Rs. 112 lakhs for this district—

1. Cement concreting 16 miles at a cost of Rs. 13·56 lakhs.

2. Black-topping 102 miles at a cost of Rs. 12·27 lakhs.

3. Upgrading and new metalling 158 miles at a cost of Rs. 24·92 lakhs.

4. New formation 336 miles at a cost of Rs. 19·47 lakhs.

5. Constructing major and minor bridges including culverts at a cost of Rs. 41·53 lakhs.

Now I shall give you an account of the various schemes on hand to improve this road on which the bridge is located. It is needless to emphasise the importance of this road which connects the eastern part of the district with its headquarters and the famous pilgrim centres, viz., Madurai and Rameswaram. The portion of Madurai-Ramanathapuram road from mile 0/1 to mile 70/5 is an existing part of Madurai-Dhanushkodi road (NH. 49). In the last three years, considerable stretch of this road has been provided with improved surface (black-top) out of the maintenance allotment. By the end of this year, the whole stretch will be black topped.

In the Second Five-Year Plan, the following works are included for improving this road :—

1. Improving the bad curves at a cost of Rs. 1·50 lakhs.

2. Widening the narrow culverts at a cost of Rs. 0·28 lakhs.

3. And widening the regulator at miles 62/7 at a cost of Rs. 0·50 lakhs.

To relieve the congestion traffic at Manamadura and Partibanur, bye-pass roads are proposed at these places at a cost of Rs. 0·8 lakhs. When all these works are completed the road from Madurai to Ramanathapuram will be a well-aligned and well-formed Highway.

Bridge at M. 66/6 of Madurai-Ramanathapuram road

Before requesting the Minister to declare the bridge open, I shall give a few details of the bridge. If you turn a while towards south you can see the old collapsed bridge with its narrow roadway of 9 feet. The bridge was declared unsafe for traffic in December 1946, as one of its piers sank due to the scour. Therefore, it became an urgent necessity to reconstruct the bridge. After careful consideration the bridge was located at the present site, about 500 feet downstream of the surplus sluice of Ramanathapuram big tank. To give a straight alignment to the road, the bridge is sited skew to the flow of the stream. The bridge has 4 spans of 35 feet clear each and it carries a carriageway of 24 feet between kerbs. The superstructure has been designed as per latest specifications of the Indian Roads Congress. Open foundations have been adopted since good hard clay was available at shallow depths and the foundations have been taken down to about 10 feet below the bed to rest on hard clay. The superstructure is of reinforced cement concrete of the conventional T. beam and slab type and it is simply supported over piers and abutments. The deck slab is 8 inches thick and is carried over by four beams 15 inches by 40

inches spaced at 6 feet 6 inches centres. The wearing surface over the deck consists of 3 inches thick of cement concrete 1 : $1\frac{1}{2}$: 3 mix. R.C.C. approach slabs of 6 inches thick are provided at either ends of the bridge. The kerbs and hand rails are of reinforced cement concrete construction. As a protective work for this bridge, a paved road dam has been constructed in mile 66/3 to discharge the flood waters, if any breach is to occur in Ramanathapuram big tank. To train the stream, cross bunds are formed from the road embankment to the tank bund. Forty-one tons of steel and 242 tons of cement, have been used on this work.

The Ramanathapuram-Mandapam road

The Ramanathapuram-Mândapam road connecting Ramanathapuram with Mandapam, an important and strategic place on the seashore with a Railway Workshop, Central Marine Research Station, etc., forms part of the Madurai-Dhanushkodi road, classified as National Highway 49, which as the name implies, should rightly connect Madurai with the extreme end of the Indian Union at Dhanushkodi.

A Bridge Across Pamban

But Dhanushkodi is at the farther end of the Rameswaram Island which is cut off from the main land by the Pamban passage. You all know that Rameswaram is an all-India pilgrim centre. Pilgrimage to Rameswaram will not be complete without a bath and worship at Dhanushkodi. Hence proposals for a road bridge across this Pamban passage with the extension of the road to Dhanushkodi has been included in the Second Five-Year Plan for National Highways at a cost of rupees one crore. This road bridge a'so will require a central lift or swing span as in the case of the Railway bridge to allow large size boats to go across the strait. When the bridge becomes an accomplished fact the existing District Board road from Pamban to Rameswaram via Thangachimadam could be taken over for National Highways and the same extended to Dhanushkodi Ghat by formation of a new road for about 10 miles thus taking the Madurai-Dhanushkodi road to its proper terminus.

A road, if it could be called so, was in existance some centuries back between Ramanathapuram and Mandapam, but this had deteriorated into a cart-track. This road was known as Mangamma Salai and in olden times it was classified as "Raja Pathai" equivalent in importance to the present-day National Highways. This old alignment has been followed for the present National Highway except in some portions where deviations have been effected in order to conform to the National Highway standards.

In this area no metal quarries are available within economic leads and metal has to be transported over long stretches by rail and is therefore every costly. As such, to provide a road with a tolerable metalled riding surface is a costly proposition. No useful purpose will be served by having only an unmetalled road in these days of fast traffic.

Soil stabilization

In order to devise means of reducing the cost an examination of the terrain was conducted. It was found that the soil throughout is sandy and that at an average depth of 4 to 8 feet good clay is available. Taking advantage of this it was proposed to resort to the techniques of soil stabilization for forming the sub-base instead of the usual sub-base of metal soilng as it would result in considerable economy. Laboratory tests on samples of soils all along the alignment showed that the available sandy soil and clay below can be scientifically combined to give a hard, safe and durable sub-base.

The work was of a nature requiring technical skill and control at every stage. This was the first time such a long stretch was taken up for soil stabliization. In view of the valuable experience that could be gained in this modern technique of soil stabilization it was considered necessary to carry out this work on controlled lines which could be ensured only if the work was done departmentally. Hence this work was carried out departmentally by a combination of manual and mechanical labour using a Pulvimixer, imported from the United States of America. This is the first time a machine of this type has been imported and used in India. Major portion of formation was done with bulldozers and stabilization work was done with Seaman Pulvimixer, sheepfoot rol'er and Tandem power roller. A film was also produced showing the construction of the road at various stages, the techniques, materials and the machinery employed on the work. The film has been a remarkable success though shot by amateurs and serves as a good record of this pioneering work.

It may be of interest to the laymen present here to know that soil mechanics and its application to Highway Engineering were totally unknown to the Engineers twenty years ago. It is true that by sheer instinct and experience we resorted to some crude methods of mechanical stabilization of soils in those early days. For example if the terrain of the rural road or cart-track happened to be predominantly sandy, the workmen sought out sticky clay or clayey gravel from neighbouring fields and mixed in intimately with the natural sandy soil to make a compact surface. If the cart-track to be repaired was in black cotton soil or clayey loam, sand or gritty gravel was carted from available spots or quarries nearby and was admixed with the natural soil to give an unyielding surface. But no one knew the science behind it. To-day we analyse the soils, their grain sizes, moisture content, plasticity,etc., and decide by laboratory tests the correct proportions of natural and imported soils to be admixed and the optimum moisture content to be added to give the maximum density and compaction of the road surface. This, in brief, is the technique of what is known as mechanical stabilization of soils.

Stabilization of soils can also be done with addition of bitumen, cement and other chemical agents. For the base course of this road cement stabilization has been resorted, to, using the sandy soil available at the spot.

As this is a National Highway the formation width of the road is kept at 32 feet with 2 : 1 side slopes and the height of formation is kept at an average of 1 foot above highest water level. The stabilized soil sub-base is 21 feet by 6 inches and soil cement base is 12 feet by 3 inches with 12 feet by $1\frac{1}{2}$ inches asphaltic concrete as wearing coat. Three feet metalled berms have been provided on either side of carriage-way to protect the edges of the wearing coat.

Comparative cost of 6 inches o kanker sub-base even for 14 feet width comes to Rs. 25,000 per mile while a 6 inch thick stabilized soil 21 feet wide

works out to Rs. 4,500 per mile. For the same reason the base course to be provided was decided to be of soil cement. The comparative cost of 3 inches granite base is Rs. 19,000 per mile while the cost of soil cement works out to only Rs. 8,800 and as such considerable savings are effected.

The total length of this road is 21 miles 2 furlongs. The work was commenced in 1950 and completed in March 1954. In this project about 1,200 tons of cement and about 550 tons of bitumen have been used. The whole project was executed departmentally employing daily labour.

This work was executed during the worst period of scarcity in this area and from October 1952 to March 1954 about 111,000 men mazdoors and 89,000 women mazdoors were employed giving a daily employment for about 250 men mazdoors and 160 women mazdoors and it went a long way in relieving distress in this area. The road could not be formally opened to traffic all these days as the level-crossing at Uchipulli which was to be constructed by the railway authorities could not be completed earlier.

The total cost for the formation of the road, providing stabilized soil sub-base, constructing culverts, etc., have come to about Rs. 4·07 lakhs and for providing soil cement base and asphaltic concrete wearing surface it has come to Rs. 9·78 lakhs. Extension of this National Highway to connect Mandapam village, Mandapm Railway station and Marine Dry Docks for a length of 1 mile 6 furlongs has also been sanctioned at a cost of Rs. 1·275 lakhs and the work is under execution. This portion of road extension is also expected to be completed by January 1956.

Bridge at M. 7/1 of Ramanathapuram -Kilakkarai Road.—This bridge was proposed to be included in the Post-War Road Development, Part II Scheme, as early as 1948, and administrative approval was also accorded for Rs. 1·75 lakhs. However, this proposal was dropped due to financial stringency. Later, there was a proposal to convert the existing road dam at a high level causeway at an approximate cost of Rs. 1·2 lakhs. However, the desirbility of constructing a pucca bridge from the point of utility was further examined and finally the present proposal was sanctioned.

As you may know, Kilakkarai is an important town with a population of over 10,000 and is noted for its chank industry and was some time back an important port for coastal trade. Near by and all along the shore there are a number of important villages noted for fishing. There is a famous shrine at Ervadi. For all these coastal villages, the only communication with Ramanathapuram, the division and taluk headquarters and a railway station is through this Ramanathapuram -Kilakkarai road. The main source of livelihood of the local people is fish trade and all the chanks as well as the fishes have to be transported to the nearby marketing places only through this road. Even the essential foodstuff has to be transported from Ramanathapuram along the route only. With the development of minor port at Kilakkarai and with the advent of the Second Five Year Plan, heavy traffic may be anticipated on this road. Hence it is thought proper to construct a bridge to the heaviest live loading of the I.R.C. Specifications.

The source of the river at this crossing is the surplus from Kalari Kanmai. It is also fed by the local drainage and the discharge due to frequent breaches in Sakkarakottai tank. At present, there is only a causeway about 460 feet long. During monsoon, there is frequent overflow over this causeway and the traffic is interrupted as the flow is fast. At times, such interruptions last even for about a week. During heavy floods, due to the insufficiency of the waterway, the road embankment gets breached, holding up traffic for a considerable period even after the subsidence of the river till the breaches are closed and road surfaces made up. Hence it is decided to take the bridge work and proceed with its execution immediately.

The new bridge is proposed to be constructed about 75 feet downstream of the existing road dam as this crossing offers the best site in this reach of the river.

The type of bridge proposed here is to be necessarily of slabs since other types of constructions will raise the road level and thus the bridge will give a grotesque appearance. Further, the soil available for the formation of approaches is of a treacherous nature and high approach embankments are considered undesirable.

The bridge proposed consists of 18 slab spans of 25 feet clear each with a carriageway of 22 feet. The R.C.C. slabs forming the superstructure will be 24·5 inches thick. R.C.C. kerbs and hand rails have been provided on either side of the carriageway.

The foundations for the piers and abutments will be of cement concrete and are proposed to be left at clay strata 6 feet to 10 feet below the bed of the river. The entire substructure is proposed to be of cement concrete masonry.

The total length of the proposed bridge is about 500 feet. The length of the approaches is about 1,300 feet. About 600 tons of cement and 78 tons of steel are expected to be consumed by this work. The total cost of the work as estimated amounts to Rs. 3·76 lakhs.

We hope that this bridge will relieve the undue hardships experienced by the people in the coastal area and will promote the steady growth of commerce and industry.

Vaippar, Uppodai and Arjuna bridges

Now, coming to the construction of these three bridges, the commencement of which is marked by to-day's function, I would like to give you an idea of the necessity for the construction of these bridges. The roadway carried by the existing bridges over Vaippar and Uppodai is very narrow for the present conditions of traffic. The existing bridges are situated in the bends of the alignment of the road and they are also considered weak and unsuitable for modern type of vehicles and standards of loading. The existing causeway across Arjuna Nadhi becomes unfordable often during floods which occur repeatedly and the interruptions last, even for a week. As such, the traffic is put to great inconvenience and hence the utility of the road as a National Highway is greatly jeopardised. Hence, in view of safety and economy, it is proposed to replace these old bridges by constructing new pucca ones designed to Indian Roads Congress specifications.

I shall now refer briefly to the chief technical features of these three bridges.

The National Highway No. 7 from Benares to Cape Comorin is an important highway. The portion of the road from mile 324/6 to 356/1 lies in

this district and connects Virudhunagar, Sattur and Koilpatti towns. As these are important commercial centres, traffic intensity is heavy in this reach.

The bridge at mile 345/7–8 across Vaippar is only 15 feet 3 inches wide and it is not fit to take up the present day heavy vehicles. The existing structure is an arch bridge having 16 spans of varying lengths giving a total linear waterway of 682 feet. It is believed that the age of this bridge is over 120 years. The central 5 spans were washed away during the floods of 1869 and rebuilt in 1874. Since the bridge is narrow, the bullock bandies and livestock get frightened and attempt to jump over on approach of the fast moving vehicles. To remedy this on representation from Sri S. Ramaswami Naidu, President, District Board, the parapet has been raised, But a wider carriageway is necessary and it is economical to put up a new bridge instead of widening or redecking this bridge.

The proposed bridge will be about 2,000 feet upstream of the existing one. It is sited here so that the traffic will byepass Sattur town relieving the congestion and the dust of traffic there.

A linear waterway of 720 feet is proposed by providing 12 spans of 60 feet each. The foundations of the bridge will consist of two circular wells of 12 feet external diameter and 2 feet to 2 feet 6 inches thick steining in cement concrete and nominally reinforced. Two such wells will be placed under each pier and four under each abutment. The wells will be taken down to rock which is 20 feet to 50 feet below bed level. The piers and abutments will be of coursed rubble masonry in cement mortar. The superstructure consists of reinforced concrete 'T' beams and slab simply supported. The clear roadway now provided is 22 feet. New approach roads will be formed for a length of about 6 furlongs on Koilpatti side and about a mile on the Virudhunagar side. The estimated cost of the bridge is Rs. 9·75 lakhs.

Uppodai Bridge.—The present bridge across Uppodai at mile 343/7 just about 2 miles from Sattur is also an old arch bridge constructed over 100 years ago. It has 7 spans of 32 feet each and the width between parapets is only 15 feet 6 inches. The existing bridge apart from being very narrow and weak is situated on a bend in the alignment of the road. In order to avoid the road passing through Venkatachalapuram village, it is proposed to construct the new bridge at a distance of 200 feet on the downstream side where the width of the river is narrow. A waterway of 240 feet has been proposed by providing 6 spans of 40 feet each. Since hard rock is available within 3 feet to 5 feet from bed level, open foundations are proposed. The substructure will be in cement concrete with plums. The superstructure will consist of reinforced concrete 'T' beams and slab simply supported. Alternatively a bridge of the arched type is also under consideration. Final decision will be taken on comparing the tenders received for both types. The bridge is now so located as to give a minimum straight approach of 50 feet on either side. The approaches will be formed to National Highway Standards and will be metalled. High embankments will be revetted with rough stone dry packing. The estimated cost of the bridge is Rs. 1·83 lakhs.

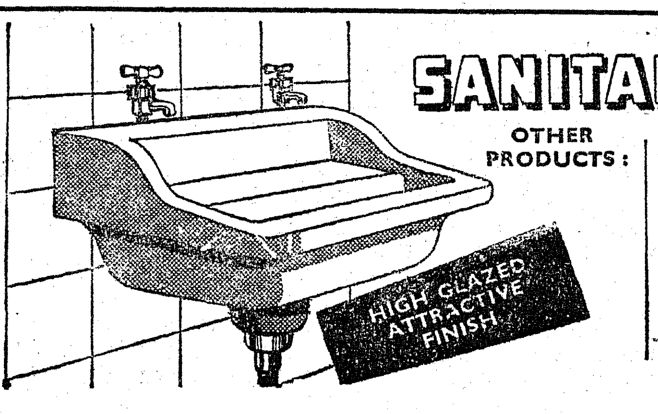
Arjuna Bridge.—There is an existing causeway 330 feet long which is passable for traffic during very low floods. Even during ordinary floods which occur several times a year, the interruption may last even for a week. Originally an arch bridge seems to have existed here, but its year of construction is not known. This was destroyed by floods in November 1869 and the present road dam was constructed about 50 years later. There has been a number of accidents to bullock bandies, lorries and cars across this crossing and traffic is interrupted frequently by floods and as such the present proposal to construct a high level bridge is essential and urgent. It is proposed to locate the bridge 50 feet upstream of the existing causeway so as to ease the curve on the right approach.

A linear waterway of 490 feet with 14 spans of 35 feet each is provided. Since rock is available within 7 feet to 24 feet, open foundations are proposed. The substructure will be in cement concrete with plums. The superstructure will be of reinforced concrete beams and slab simply supported. The clear roadway is 22 feet. The estimated cost of the bridge is Rs. 4·08 lakhs.

The quantities of steel and cement required for these bridges are as below :—

	Cement. TONS.	*Steel.* TONS.
1 Vaippar Bridge (Mile 345/7 B.C.C. Road).	1,158	279
2 Uppodai Bridge (Mile 343/7 B.C.C. Road).	227	71
3 Arjuna Bridge (Mile 339/4 B.C.C. Road).	685	115

With the completion of these three bridges as well as other bridges envisaged in the Five-Year Plans, the road communications in this district will be considerably improved.



SANITARY WARES

OTHER PRODUCTS :
Reinforced Cement Concrete Pipes
Sanitary Wares
Dalmia Electric Insulators & Acid Jars
Stoneware Sewage Pipes
Dalmia Refractories

DALMIA CEMENT (BHARAT) LIMITED
DALMIAPURAM (TIRUCHIRAPALLI)

Misc. 145

CONN... 5 - OCT 1955 MADRAS

Cinchona Industry in Madras State

By SRI A. Y. SWAMY, M.A., M.SC. (TECH.) (Manchester), Director, Cinchona Department, Ootacamund

Cinchona has rightly been called a "gift from the Gods". It was originally growing in the wilds of the Andes in South America and was known as Peruvian bark. The medicinal value of the bark of the tree appears to have been known as early as 1600 A.D. to the aborigines of South America, viz., the Incas. Quinine, the most important constituent of the bark, was isolated in 1820 by French Chemists and almost since then has held the field as a sure and safe remedy for malaria. Legend has it that a decoction of this bark given to the Countess of Chinchon, wife of the Spanish Viceroy of Peru, cured her of an attack of fever about the year 1638. A hundred years later Linnaeus, the great Botanist, perpetuated the memory of this noble lady by giving the genus, the name of Cinchona. No real effort appears to have been made to cultivate Cinchona trees in South American forests and still less to maintain supplies by replanting uprooted areas even though a substantial revenue was obtained by taxing the exports of bark. Regular supplies of the South American Cinchona bark were being sent to Europe and the bark soon became quite famous for its fever-curing qualities. Soon after the isolation of Quinine in 1820, this alkaloid replaced the crude forms of administration by the use of the bark powders, decoctions and tinctures which had established the reputation of the bark.

Earlier Efforts

Malaria was one of the greatest scourges in this country during the 19th century. As long ago as 1835, Dr. Forbes Royle, the Superintendent of Botanical Gardens at Saharanpur, suggested to the East India Company that efforts should be made to introduce Cinchona into India and he selected the Nilgiri Hills in South India and the Khasia Hills in Assam as likely localities for plantations. But nothing happened until his death in 1857. Eventually in 1859, the East India Company decided to accept the recommendations of Dr. Forbes Royle and introduce the Cinchona plant from South America into this country. Mr. Clements Markham was selected for the work of scouring the forests of South America for seed and plants of Cinchona and a happier choice could not have been made, owing to his knowledge of the Andes and his ability to speak the language of the natives of that region. Mr. Clements Markham returned to India in 1860 with the seeds and plants of Cinchona. Doddabetta with an elevation of 8,000 feet above mean sea level, a place four miles from Ootacamund and just above the Raj Bhavan and the Government Botanic Gardens, was selected as the most promising place for raising the Cinchona seedlings and to make cuttings from the plants brought out by Mr. Markham. Mr. W. G. McIvor, who was then Superintendent of the Botanic Gardens at Ootacamund, took charge of this experiment and with the approval of Mr. Markham started the first Cinchona Plantation at Doddabetta.

A second experimental station was later selected at Naduvattam, 21 miles from Ootacamund and having an elevation of about 5,800 feet above mean sea level. The Madras Government Cinchona department has emerged from these experimental stations started in 1860. McIvor sent a small number of plants to Calcutta with a view to establish plantations at Sikkim and a small quantity of seeds was also obtained from the Kew Gardens for raising seedlings at the Royal Botanic Gardens at Sibpur, Calcutta. About the same year, McIvor exchanged with the Dutch Government at Java some of their plants with those raised at Doddabetta. He also sent a small quantity of seed to Ceylon to start the Cinchona industry in that island. In 1863, Dr. Anderson who was then Superintendent of the Royal Botanic Gardens, Sibpur, Calcutta, also obtained some seed and plants from McIvor in exchange for some of his Java-bred seeds and plants and opened up the plantations on the Mungpoo ridge on the Himalayas in Bengal from which have grown the present Bengal Cinchona Plantations. Thus it will be seen that the Madras Government Cinchona Plantations came into being first, and only three years later the Bengal Cinchona Plantations were started.

The First Species

By 1864, the Madras Government Cinchona Plantations had over 165,000 plants while the Bengal Government Cinchona Plantations had only 523 plants. The species of Cinchona which were first introduced into this country were Cinchona succirubra, Cinchona officinalis and Cinchona calisaya. Cinchona officinalis which has a good Quinine content did very well in Doddabetta on the Nilgiris while it was a thorough failure at Mungpoo in Bengal, where Cinchona calisaya showed better promise, but being rather exacting in its requirements of soil and situation it was cultivated only on a limited scale, the preference to the bulk of the plants being given to Cinchona succirubra variety which was easier to cultivate but is poor in Quinine content. The Mungpoo plantations are unique in affording areas at an elevation of as low as 800 feet and as high as 6,000 feet.

Government Plantations Expand

It was not the intention of the Government at any time that these experimental stations should in any way be competitive plantations to those which they actively encouraged private enterprise to embark upon. The Government Plantations were only to render technical advice and to distribute at low cost, seed and seedlings of suitable varieties to private enterprise. But two years after Cinchona planting had been in progress in South India there was, in the official view, an absence of that expected enthusiasm on the part of private enterprise to take

to anything but very small plantings. Consequently the Government had no alternative but to enlarge the area of their own plantations in the Nlgiris. Thus by about 1866, the expansion of Madras Government Cinchona Plantations had gone apace and as much as 507 acres were under Cinchona, 152 at Doddabetta, 284 at Naduvattam and 71 at Wood Estate near Naduvattam.

It however did not take long for the position to change, as the very successful performance of Cinchona in markets now became an incentive to private interests, and numerous Plantations of Cinchona sprang up on the hills. Under orders of Government seeds and plants were freely given by McIvor, and Balmades Estate was opened in 1868 with 60 acres. Colonel Dennison planted 400 acres at Ossington and a large number of other interests who purchased lands in the Nilgiris under the Waste Land Rules of 1863 also undertook cultivation. Similarly small plantations came up in Coorg, Shevroys, Palnis, South Kanara, Tirunelveli and Mysore mainly from the material obtained from the Government Plantations. The Government Plantations also kept pace in expansion and by 1880 there were 847 acres.

In 1870 Broughton was appointed as Chemist for analysing the bark and for manufacture of the alkaloids from the bark. He started a small factory at Naduvattam and this formed the nucleus of the present Quinine Factory there.

Ruin of the Cinchona Industry

So far all was well with the industry. The Indian Plantations looked very encouraging and they held out promise of being the main source of supply of bark to the world. But unfortunately this was not to be. For, the large profits made by the earliest Cinchona planters led soon afterwards to indiscriminate rush by private enterprise especially in South India and Ceylon into the new industry. An enormous area very much in excess of the demands of the time or of the foreseeable future, was planted, chiefly with low Quinine-yielding species. Much planting was also done on land unsuitable for the crop. The result was a very large over production of bark of rather low grade, and when this was placed on the market the entire industry in India and Ceylon suffered a great crash. No fewer than 5,000 acres in India and perhaps about 30,000 in Ceylon belonging to private enterprise went out of cultivation. Java however survived the wreck. This she was able to do mainly because of the close scientific control which had been exercised from the very early stages of the industry and the immeasurably superior conditions for growth existing in that country. The formation of the Kina Bureau in Java in 1913 further strengthened the Java industry and by 1938 she had come to occupy a position as the premier Quinine producing country in the world.

Resuscitation

When rumours of the possible retirement of Java from the field reached this country in the first decade of this century the necessity for the resuscitation of the industry to keep up the supplies of the much needed Quinine in India came to be realised. But it no longer held any but meagre attraction to private enterprise. The crash suffered by Cinchona in the eighties had discouraged them greatly and was still fresh in their memories. Secondly the Government could give them no guarantee of a minimum price for bark which they asked for. There was also the attraction of other plantation crops like tea and coffee which were paying high dividends. It therefore necessarily devolved on the Government to take up the expansion of the Cinchona Plantations. In 1916, forest lands in the vicinity of the Government Cinchona Plantations at Doddabetta and Naduvattam were examined and rejected in favour of a large block of Reserve forest land in the Anamalais. In 1916 a scheme for planting 22,000 acres of virgin forest land in these hills was approved by the Government but a start was made there only in 1925.

Development of the Industry

The Cinchona department of Madras Government, needless to say, was born out of the experiments done in the Nilgiris. From the time of the introduction of Cinchona in the Nilgiris till 1896, Cinchona work formed part of the activities of the Agricultural department. Thereafter the Cinchona Plantation and Factory were constituted into a separate unit.

The West Bengal Government have to-day large areas under Cinchona cultivation and they are producing quinine in their own factory at Mungpoo. Assam too has Cinchona Plantations but on a small scale having only about 700 acres and they have recently proposed to construct their own factory to process the bark from their plantations. The area in Assam was developed only in recent years and Assam's contribution so far of manufactured quinine has been little.

The Madras Government Cinchona department is treated as a Government commercial concern and has a capital outlay of about 240 lakhs of rupees.

Plantations

The total area under Cinchona cultivation in the Departmental Plantations to-day is 9,637·3 acres comprising of 2,381·8 acres in the Nilgiris and 7,255·5 acres in the Anamalais. Of this, an area of 5,734·3 acres is planted solely on Government of Madras account; an area of 200 acres solely on Government of India account and the balance area of 3,503·0 acres as a joint venture of the Governments of Madras and India.

The plantations at Doddabetta and Naduvattam which were the first to be started in this country continue to exist and have been expanded considerably and replanted a number of times since then. The Anamalais plantations were, as stated above, opened in 1925. At the end of 1939–40 the acreages at Naduvattam and Anamalais were respectively 1,339 and 939.

With the outbreak of war in Europe in 1939 the demand for quinine increased enormously while the supplies of the drug from Java diminished gradually and were finally cut off by the outbreak of war in the Far East and the occupation of the Netherlands by the Japanese in 1942. Enormous quantities of quinine were needed then to meet the requirements of the army as well as the civilian population. The internal production at that time was scarcely sufficient to meet the emergent and growing demands. Quinine distribution was therefore immediately put under control and a large expansion of the Government plantations was ordered by Government. Between 1940–41 and 1942–43, Madras alone planted 1,018 acres in the Nilgiris and Anamalais. At this juncture the Government of India came with a proposal for close planting of Cinchona under the so-called short-term Russian Method and between 1943–44 and 1946–47, 801 acres in Nilgiris and 2,702 in the Anamalais were planted as a

joint venture of the two Governments. The Government of India also offered financial assistance to private planters but the response was rather poor. The State Government continued their expansion programme beyond 1946–47 and from 1947–48 to 1949–50 an area of 247 acres was planted in the Nilgiris and 2,835 in the Anamallais. The acute financial stringency at this stage cut short further expansion activities and no new planting was undertaken from 1950 onwards. Replacing of casualties on the field and consolidation of old plantation areas is however being continued.

Research

A research unit for improving the quality and increasing the yield of bark was constituted towards the end of 1942 and was expanded in 1945. The Government of India is contributing a share of the expenditure of this unit.

A successful technique of large scale vegetative propagation of Cinchona has been evolved and over 20 clones with high quinine content, including a world-record-yielder containing 17 per cent Quinine Sulphate and possessing other desirable qualities have been isolated. These are being propagated on a mass scale vegetatively. Careful studies have shown that by such propagation the quinine content of the bark has been vastly increased. This unit is also engaged on studies on espacement, cultural practices, thinning, manuring, soil conservation and soil improvement.

Factory

It has been stated already that the factory for manufacture of alkaloids was opened in 1870 at Naduvattam. This old factory got burnt down in 1920 or so and the present factory at Naduvattam was constructed soon afterwards. The normal production of this factory is 20,000 lb. of Quinine Sulphate and 10,000 lb. of other alkaloids a year, but the factory has produced as much as 60,000 lb. of Quinine Sulphate and 30,000 lb. of Cinchona Febrifuge during war years. The bark from the Government plantations and private estates in the Madras State is processed in this factory. When Government ordered the large-scale expansion of the Government Cinchona plantations during war years, they simultaneously ordered the construction of a new Quinine Factory on modern lines on the Anamallais to cope up with the newly raised plantations there. This factory will go into production on the 14th May 1955, and has a rated capacity of 60,000 lb. of Quinine Sulphate and 30,000 lb. of other alkaloids per annum.

Quinine from Cinchona.

The bark of the mature cinchona tree is the starting material for the extraction of cinchona alkaloids. The bark occurs in quilled pieces of variable thickness and length. The rough outer surface is grey or brownish grey, showing both transverse and longitudinal fissures and often bearing lichens; the inner surface is striated and varies in colour from yellowish brown to deep red brown. The bark possesses a bitter astringent taste.

Constituents of Cinchona bark.

The crystallisable alkaloids in Cinchona bark are Quinine, Cinchonine, Cinchonidine and Quinidine of which Quinine is the most important. In addition, twenty-five other amorphous alkaloids have been isolated and these occur in small proportion and have no special application in commerce. All the alkaloids are present in the bark as salts of the organic acids, Quinic acid and cinchotannic acid. Besides the alkaloids, the other important constituents of the cinchona bark are the dyestuff called cinchona red and the bitter glycosides, Alpha-Quinovin and Beta-Quinovin.

Extraction of cinchona bark

The dried cinchona bark is ground into fine powder and mixed with lime and caustic soda in suitable proportions. The alkalis act on the bark and liberate the alkaloids from their natural state of combination. The bark alkali mixture is then extracted with solvent oil which in turn is agitated with dilute sulphuric acid when we get all the alkaloids transferred into the sulphuric acid liquor.

When this acid liquor is neutralised with caustic soda, Quinine sulphate is precipitated in crude form, leaving the other alkaloidal sulphates in solution. The crude quinine Sulphate is separated from the liquor and refined using activated carbon while the mother liquor is treated with excess of caustic soda to precipitate the other alkaloids which are collected, purified, dried and marketted as Cinchona Febrifuge which is a cheap substitute for Quinine.

The refined quinine sulphate is also the starting material for manufacturing special salts of Quinine like Quinine Hydrochloride, Quinine Bihydrochloride, Quinine Bisulphate, Quinine Hydro-bromide, etc.

The Quinine Sulphate produced by the Madras Government Cinchona Department in the past used to be coloured pink for distinquishing it from other makes of Quinine. The entire production was also reserved for supplies to only Government, Municipal and Local Fund Medical Institutions and private organisations and public were not supplied with Government Quinine. Quinine sales were however thrown open to the public after decontrolling it from June 1950. While the policy in the old days appears to have been that there was not sufficient production in the Naduvattam Factory to meet the demands of the public and hence supply was restricted only to the Government Medical Institutions; the present policy is to serve the country by serving the public in all sectors and adjust production to the demand. India is divided into three zones for the distribution of Quinine products. One zone being supplied with Quinine products by the Madras Cinchona Department, another by the West Bengal Cinchona Department and the third by the Government of India. The Madras zone comprises of the States of Madras, Andhra, Mysore, Coorg, Tranvancore-Cochin, Bombay, Hyderabad, Madhya Bharat, Madhya Pradesh, Vindhya Pradesh, Sourashtra, Kutch and Bhopal.

Quality of products

The Quinine products manufactured by this department have been kept up to the British Pharmacopœia Standards from the year 1944 but for the pink colour which was deliberately added to the Quinine Sulphate. From the year 1950 however the pink colouring was discontinued when British or Indian Pharmacopœia Standards became official and compulsory in the country. The products manufactured in the Quinine Factory at Naduvattam are Quinine Sulphate, Bi-Sulphate Hydrochloride, Bi-hydrochloride, Hydro-Bromide, Bi-Hydro Bromide and Salicylate; Totaquina and Cinchona Febrifuge.

Till recently the distribution of the bulk of the quinine and other cinchona products was being done by the Superintendent, Central Jail, Coimbatore. This work has since been

taken over by the Cinchona Department and supplies to Medical Institutions and the public are now made direct from the factory. Powders are available in four packings, i.e., 1 oz. 1 lb. 5 lb. and 10 lb. and tablets in three packings, i.e. 10 numbers, 100 numbers 1,000 numbers.

Of late experiments are being conducted with various medicinal and essential oil plants, both on the cultivation side on the field and extraction side in the laboratory. These trials are purely in an experimental stage and it will take some time before the Department can launch out schemes on a commercial scale. The one article already being obtained on a commercial scale and available for sale to the public and manufacturing concerns is Eucalyptus Oil distilled from the leaves of the Eucalyptus trees growing in the Government Cinchona Plantations, Nilgiris.

Importance of Quinine to humanity

Malaria has been described as one of the greatest scourges of mankind and it is believed that if adequate curative treatment is given for this single disease, India can be converted in a single generation to one of the most prosperous and healthy countries in the world.

The value of Quinine as a curative to Malaria has been known since time immemorial. The special feature of this drug is that it is a natural product and has stood the test of time over a period of centuries. And to us it is of special interest because Malaria is one of four greatest problems in this country.

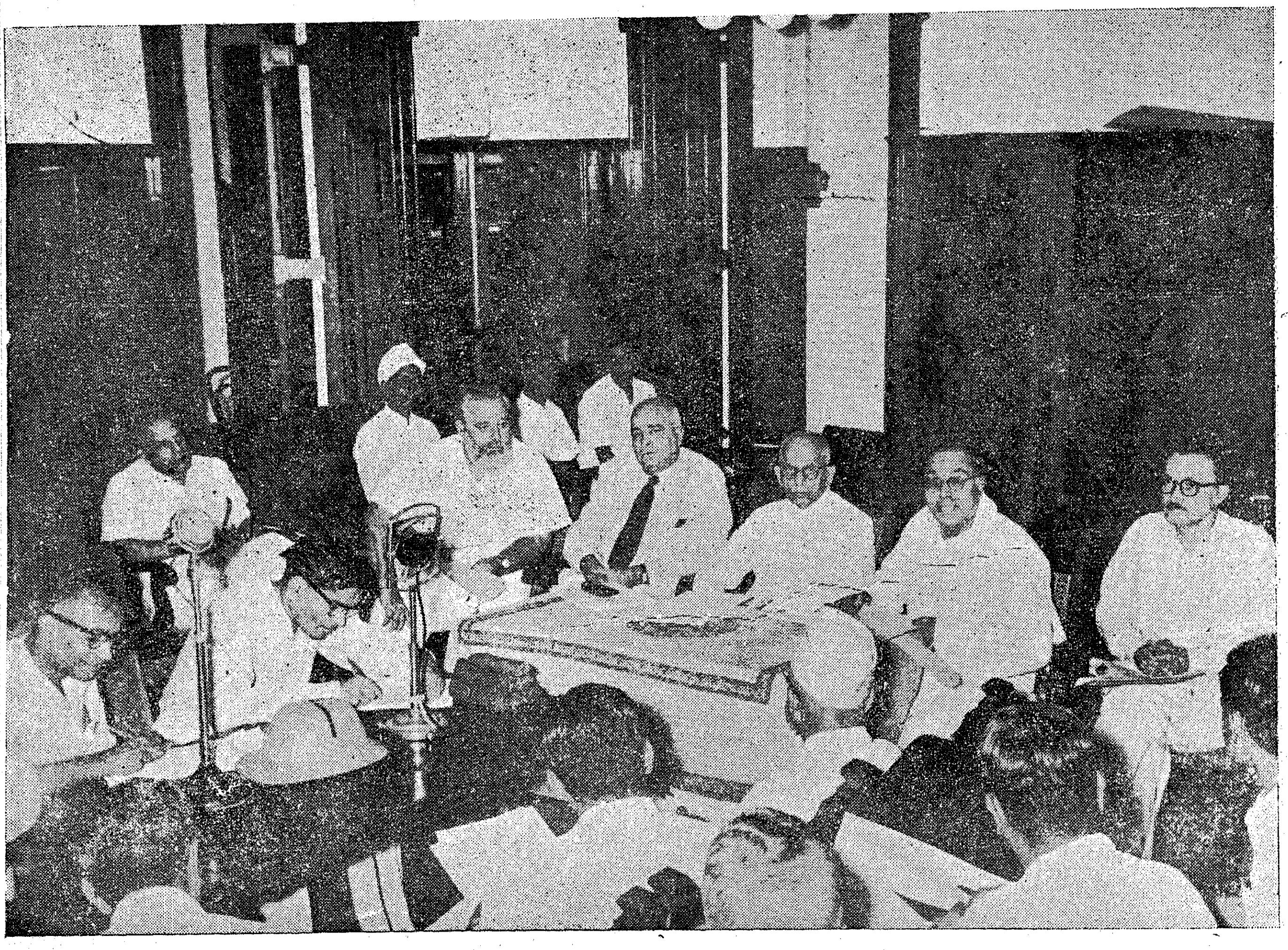
Facts and Figures

During the first quarter of 1955, the total production of cloth by the mill industry increased by 11 million yards (to 1,262 million yards) as compared with the previous quarter.

During the same period the production of sugar amounted to 9,58,300 tons as compared with 7,10,100 tons for the corresponding quarter of 1954.

Indian aircraft flew nearly 13·2 million miles during the period July—December 1954 as against 12 million miles flown in the previous half-year.

The number of aircraft holding current certificates of registration at the end of December 1954 was 623, of which 199 held current certificates of airworthiness.



"LEPROSY IS CURABLE"—In connection with the membership and publicity campaign of the Hind Kusht Nivaran Sangh, a press conference was held in the Secretariat recently. Sri A. B. Shetty, Minister for Health, and Medical Experts on leprosy were present.

CONNEMARA PUBLIC LIBRARY
5 - OCT 1955
MADRAS

Our Literary Heritage:

Modern Bengali Literature

By PROFESSOR PRIYA RANJAN SEN

The last of the Medievals

Like the two-faced god Janus who faces both the immediate past and the immediate future, Bharat Chandra, the last of the medievals and the first of the moderns in Bengali literature, while continuing or concluding the "Mangal Kavyas", changed the tenor of literature and made it more concerned with ordinary human life and emotions than with the other world. For, folk literature apart, it will not be wrong to say that the difference between old and medieval and modern literatures largely amounts to the difference in interest in the other world and this. Bharat Chandra is interested in the Chandi cult, but at the same time his treatment of the love affair of Vidya and Sunder is essentially carnal. And Bharat Chandra was not alone in this ; if we survey eighteenth century Indian literature, we shall see everywhere the same romantic, rather erotic, trend, the same polished style revelling in rhetorical excellences, the same command over poetic measures, and conclude that it was an all-India change gradually assuming a distinct shape. Bharat Chandra's immediate influence is seen in the effusions of the Kabiwallas in early 19th century who did so much to keep alive the soul of potery and who produced lyrics nominally dealing with the amours of Radha Krishna but really turning out love poems, pure and simple.

But the battle of Plassey during the lifetime of Bharat Chandra, changed the political, ecnomic and social aspects of the country. The East India Company found by experience that it was necessary for its officers to know the language of the country they were going to administer. The young officers coming to India had therefore to be trained in the laws, languages and social codes of the country. This led in time to the foundation of the College of Fort William in 1800, for which Dr. Gilchrist, its first Principal, had prepared the ground by his knowledge of Hindi for which he had given up his job as a ship's surgeon. The College of Fort William was an institution where the grammars,and word-books of Bengali, Hindi, Hindustani, Punjabi, Oriya and other languages were studied and written by English scholars with the help of Indian scholars, Pandits and Munshis, who also prepared reading lessons, primers and readers and thus paved the way for prose compositions in the different languages. It was here that Dr. Carey, a great linguist who rose from humble beginnings and who was first and foremost a missionary, came out to India to translate the Bible in different languages, wrote his grammar, dictionary, readers in Bengali, designed to help the young administrators no doubt, but at the same time useful to all young learners.

The New Awakening

Meanwhile, Rammohan Roy appeared on the literary field with his treatises in Bengali on philosophical subjects. He is admittedly the maker of modern India by virtue of his zeal for investigation into truth, for his universal religion, for demolition of orthodoxy and superstition and for introduction of the spirit of enquiry. He made Bengali prose a fit vehicle for philosophical investigation, and also joined issues with English Missionaries, so that with him we find the rise of controversial literature. And for successful controversy he started periodicals.

The pace for journalism had been already set in the second decade of the nineteenth century with the Missionaries at Serampore. The East India Company did not want to take or encourage any steps which might disturb their administration and they did not at first like Christian Missionaries to preach the Gospel if there was any risk involved in their own administration and commercial pursuits. That was the reason why the missionaries concentrated at Serampore still under Danish protection, and started with some hesitation from Serampore the Bengali periodical "Dig Darshana" and the newspaper *Samachar Darpan.* Bengali journalism, thus born, made quick progress.

We now come to the thirties when Ishwar Gupta came to the forefront. He was clever with his puns and alliterations used in his poems and prose writings. He introduced the custom of poets' gathering on the Bengali New Year's Day, and to him goes the credit or first starting literary organisations in Bengal. He liked English poems to be translated into Bengali in metre corresponding to the English original, and he encouraged such works both by publishing them in his paper and by awarding cash prizes for them. Towards the end of the third decade we find Maharshi Devendra Nath Tagore establishing a society named Tattwa Bodhini Sabha with its organ "Tattwa Bodhini Patrika." Akshoy Kumar Datta and Ishwar Chandra Vidyasagar were both associated with this paper. Bengali prose received a great impetus through Tattwa Bodhini and while Akshoy Kumar was Indianising European science and rationalism, Vidyasagar enriched Bengali with his adaptations—"Betal Panchavinsati" from Hindi, "Bhranthi Bilash" from Shakespear, "Shakuntala" and "Sitar Banbas" from Sanskrti—each with its distinctive treatment and style. Urgent social reform and spread of education took up much of this time, still he attempted an autobiography, and left a prose elegy which proves the originality of his mind.

Assimilation of western forms

Translation work indeed was in the air during the fifties and the Vernacular Literature Society did much to encourage the writing and publication of small books of different kinds, both original and translation, all sold at a very moderate prices. It was in the middle of the fifties, however, that the creative spirit for which preparations had been afoot, emerged through Michael Madhusudan Dutta who successfully introduced blank verse in Bengali, wrote an epic in European style on the death of Meghnad, successfully imitated Ovid in his "Virangana", put himself in tune with the traditional Radha-Krishna poetry in his "Vrajangana," and wrote dramas with a fine disregard for the author of "Sahiya Darpan" and his codified rules and regulations. It was he again who introduced the sonnet to Bengali. Historical drama, tragedy, farce and romantic comedy—he set a pattern for all these, and with equal success. For one individual to have done all these and more—all innovations in their own line—was something unique But his greatest and most serious work was still to come; good or marvellous as we pronounce his works tobe, he considered them as more or less experiments. The change had no doubt begun earlier with Rangalal and his "Padminir Upakhyan", and naturally poets who tried to evoke patriotism resorted to Todd's Annals of Rahjasthan, for the history of the Rajputs and their glorious defence against invading hordes supplied a fertile ground for heroic themes. But Hemchandra and Nabin Chandra and many others travelled in the wake of Michael and the vein of epic poetry has not yet run dry.

Madhusudan had before him predecessors like Ram Narayan of the old school against whom he revolted and one of his contemporaries, Dinabhandu, became the spear-head for agitation against the indigo planters. But it was Madhusudan's form which was adopted by amateur theatricals. It was a great departure from the Sanskrit style. After Madusudhan's death theatricals were greatly handicapped for want of new plays, but Girish Chandra Ghosh stepped into the breach and, from 1872 to the year of his death 1912, continued to produce plays, organise dramatic centres and train actors and actresses and in this way was an institution by himself. Naturally his dramas varied in character. It is not possible to sum up his dramas. The difference, however, between the old and the new—between the old Jatras and the new plays—may be described as consisting in the reduction of songs and taking help of stagecraft, painted scenes and wings, orchestra, etc. In drama, there were other experiments; Jyotirindra Naths' plays conforming to the Greek unities and Kshirode Prasad's powerful plays and also Dwijendra Lal Roy's historical plays, sometimes looked askance for their bold and outspoken patriotic songs and expressions.

But let us go back to 1860. Bankin Chandra Chatterjee was coming into his own. His "Durgesh Nandini" at once put a stop to the hesitation with which attempts at writing novels were being made. Bankim Chandra wrote a number of novels, some historical, many social, three philosophical "Anandamath", "Devi Choudhurani" and "Sitaram". He did not mince matters when he ridiculed the social or the political reformer, but in his own way he also was a reformer and a radical reformer at that. In his philosophical novels he tried to show how only selfless work paid, and how, as soon as we are attached to our work and its results, the rot begins. If Prafullamayee could be a success, both as Devi Choudhurani and at home, it was possible only because she was completely unattached in the philosophical sense of the word. Translated into many of the modern Indian languages, his novels have inspired authors outside Bengal. Through his magazine "Banga Darsan," he also ruled over the reading public just as Dr. Johnson did in his time. His serious prose writings contained food for thought for the reader who had received English education. As a matter of fact he wanted such readers specially to turn to Indian culture. For them he wrote his "Anushilana", and as an example of Anushilan he held up Sri Krishna as the perfect embodiment of culture.

Rabindranath Tagore

Influenced by Bihari Lal in his early days, Rabindranath Tagore had developed a subjectivity in perfect accord with his own lyric genius. The influence of "Kamala Kanter Daftar" may be traced in earlier prose and that of the historical novels has left its shadow in his earlier novels. But it was the outer mechanism only. Rabindra Nath turned the novel into a new channel—more concerned with the changes of the mind. He has experimented with metres and presented our language with new measures even utilising the rythms of prose as the vehicle of poetry. He has written a number of beautiful short stories where humour is blended with pathos and tears with laughter. He has produced volumes of prose unrivalled in style and suggestiveness. He has produced fundamental books in prosody, criticism, education, and the master's touch is always there. A wonderful genius; accustomed to hard work, responsive to national movements, Rabindranath filled the whole of our literary arena with his personality during his lifetime.

Sarat Chandra Chatterjee, the spokesman of those who were neglected by society turned his life on them discovering in them the beauty and dignity of the human soul. He questioned the current social values and tried to rouse the leaders to probe fundamental social questions. There was also Pramatha Choudhury whose scholarly knowledge of Sanskrit and French literature bore fruit in short stories and critical essays. We may mention also Bibhuti Bhushan, the author of "Pather Panchali", whose story has a lasting place in the annals of our literature.

Bengali like other modern Indian languages has come into more and more prominence in recent years. Bhudeb, Dwijendranath, and Ramendra Sundar have endowed Bengali prose with lasting vigour and suppleness. There is moreover no dearth of talents atpresent. In short story, in serious literature, in the weaving out of varieties of beautiful prose, we can still point to authors who command respect. Moreover, now that political independence is an accomplished fact, we have more confidence in the future of Bengali literature. It will take something from other literature and give something of its own and that way lies the line of a normal and healthy national development, combining new realism with its innate remanticism.

Ayurvedic Practitioners

There are at present 89,118 registered Ayurvedic practitioners in India.

Up to June 1955, 7,785 acres of land had been brought under cultivation in the Central Mechanised Farm at Jammu

A Census Analysis

According to the 1951 Census, 857 lakhs (or 82·1 per cent) of the 1,044 lakhs self-supporting persons live in the villages in India, as against 187 lakhs (or 17·9 per cent) in the urban areas. Of the total population of 3,566 lakhs (figures for which are available) 1,044 lakhs (or 29·3 per cent) are described as self-supporting persons, 379 lakhs (or 10·6 per cent) as earning dependents, and 2,143 lakhs (or 60·1 per cent) as non-earning dependents.

Further breakdown of the figures for self-supporting persons shows that there are 151 lakhs (or 14·5 per cent) of such females in the rural areas ; the corresponding figures for females in the urban areas is only 21 lakhs (or 2 per cent).

These figures have been given in "The Appendices to the Census Report, 1951", recently published by the Deputy Registrar General of India.

Growth of Population and Cultivation Analysed

An analysis of the growth of population related to cultivation indicates that after 1921 the growth of population had become rapid and uninterrupted while the increase in cultivation was "small and proportionately much less than the increase in population." This suggests that during the sixty-year period from 1891 to 1951 the balance in the growth of population and cultivation in certain parts of India, selected for this survey, had been achieved in 1921. Thus, in the first thirty years the population rose from 815 lakhs in 1891 to 833 lakhs in 1921, while the area under cultivation proportionately increased from 890 lakhs acres in 1891 to 927 lakhs acres in 1921. Between 1921–1951, however, the population increased to 1,179 lakhs, whereas the area under cultivation has increased to 991 lakh acres.

Detailed Appendices give other data

The volume contains seven detailed appendices dealing with birth rates and death rates, review of the census economic data, famine and pestilence, shortages of foodgrains, irrigative projects and irrigation development

(*Continued on the next page*)

Rural Electrification

The number of villages electrified during the month of July in the various systems was as follows :—

Pykara System	31
Mettur System	5
Papanasam System	5
Madras System	1
Total	42

The names of villages together with the details of taluks and districts are given below :—

Name of village.	*Taluk.*	*District.*
	Pykara System.	
Semmandampalayam	Palladam	Coimbatore.
Kamayagoundenpatty	Periakulam	Madurai.
Kethanur	Palladam	Coimbatore.
Chavadipalayam	Do.	Do.
Mettupalayam	Do.	Do.
Thottipalayam	Do.	Do.
Ellamanaickenpalayam	Do.	Do.
Kethanur—Manthiripalayam	Do.	Do.
Chinnakanur	Avanashi	Do.
Kanoorpudur	Do.	Do.
Thottapalayam	Do.	Do.
Konampalayam	Do.	Do.
Yellanhelli	Coonoor	Nilgiris.
Chundale	Wynaad	Malabar.
Thummanampatty	Ootacamund	Nilgiris.
Dharumathampatti	Dindigul	Madurai.
Karasalpatty	Do.	Do.
Palaniyur	Do.	Do.
Pondampatti	....	....
Basavapalayam	Gobi	Coimbatore.
Varadampalayam	Do.	Do.
Kottuveerampalayam	Do.	Do.
Chinnakuilai	Palladam	Do.
Thambakavandampalayam	Coimbatore	Do.
Keelavadakarai	Periakulam	Madurai.
Naipally	Udipi	South Kanara.
Kattacherry	Ootacamund	Nilgiris.
Kundachappai	Do.	Do.
Kuppache	Do.	Do.
Morgal	Do.	Do.
Berlatti	Do.	Do.
	Mettur System.	
Pandunali	....	North Arcot.
Panangadu	....	Salem.
Thayagadurgam	Kallakurichi	South Arcot.
Kallakurichi	Do.	Do.
Govindavadi	Kancheepuram	Chingleput.
	Papanasam System.	
Periaperali	Sathur	Ramanathapuram.
Annaikuttam	Do.	Do.
Ellupaiyurani	Koilpatti	Tirunelveli.
Uthupatti	Do.	Do.
Thiravianagar	Tenkasi	Do.
	Madras Electricity System (Distribution).	
Perumalagaram	....	....

Work on large number of rural extension schemes spread over the entire state was progressing. The following are the particulars of lengths of new lines constructed and energised during the month in the various systems :—

	Length of lines in miles.	
	H.T.	L.T.
Pykara System	23·31	44·65
Mettur System	7·76	36·70
Papanasam System	6·78	19·80
Madras System	4·53	7·68
Total ..	42·38	108·83

In the Madras System a total number of 179 D.C. Services with an approximate connected load of 148 K.W. were changed over to A.C. supply on a voluntary basis.

During the month 23 extension were sanctioned by the Chief Engineer for Electricity and Chief Operation Engineers at an estimated cost of Rs. 11·17 lakhs.

Do You Know ?

1. That Travancore-Cochin is by far the largest producer of raw rubber in the country, accounting for about 85 per cent of the area under rubber plantations.

2. And that the State of Madras comes next with about 12·5 per cent of the area, while Mysore and Coorg together contribute nearly 2·5 per cent.

3. That the Standing Committee for the metric system of weights and measures has decided that all new plants and equipment to be used in Government undertakings should be based on metric system.

4. And that it has also been decided to suggest to the Chambers of Commerce and Industry to follow the same principle in regard to new plants and equipments.

5. That the All-India Khadi and Village Industries Board has taken a decision to revive the production of the famous Dacca Muslin.

6. That the Government of India will award during 1955–56 a limited number of post-school scholarships of the value of Rs. 100 p.m. to blind students for post-matriculation education and for professional training.

(*Continued from previous page*)

projects, and maternity data and birth control, respectively.

The statistics relating to population and land use bring out the relationship between population and natural resources in general, and cultivation in particular. In tables on birth rate and death rates all available data about the registration of births and deaths have been correlated with the census data and scrutinized critically. The final review of the census account fixes the birth rate in India at 40 and death rate at 27 during the decade 1941–50.

The economic data relates to the household economic status of people, viz., self-supporting persons, earning dependents and non-earning dependents.

Famines in 1769–1880 and Relief and Remedial Measures

In setting forth figures for famine and pestilence between 1769–1880, it is pointed out that out of the 21 famines and scarcities, 8 were "intense famines" 9 "famines", and 4 "scarcities." Five of the 8 "intense famines", covering a total period of 11 years, it is added, affected 202 million people.

The unhealthy effects of such famines and scarcities are, however, the report says, gradually diminishing, "partly by the more efficient character of the relief given, partly by the extension of the means of communications and development of internal trade, and partly by the greater preparedness of the people to meet them which grows from the increase of thrift and resourcefulness and accumulation of capital due to a settled and civilized Government."

The last appendix gives maternity data and birth control figures in certain part of India and some notable comments on these subjects.

(*Continued from page 13*)

Such a meeting is profitable to the urbanised students, as well as to the rural masses. On the basis of personal experience gained, the writer ventures to make the following suggestions :—

(1) Since the camps are useful in instilling the spirit of social service and community outlook, conducting of Camps on an All-India basis would certainly go a long way in releasing a tremendous reservoir of voluntary labour and energy of youths which could be harnessed in the implementation of the Second Five-Year Plan. Such national camps would be purposive in so far as they would arrest parochial tendencies and develop a national outlook among those who are the leaders of tomorrow. The members of the camps can be drawn from different States, so that apart from learning the dignity of manual labour, there can be useful cultural contacts.

(2) A long term programme for summer camps may be formulated in the Second Five-Year Plan. The programme should include the construction of permanent buildings in rural areas, so that social service campers may be stationed in neat and healthy surroundings. Further the camp-sites must be provided with facilities for different types of sports. Community theatres may also be constructed within the camp-sites, so that the campers may conduct dramas, music concerts and dancing recitals. Permanent camp-sites (to begin with they can be about 100) may be distributed all over the country. We have many lakes and forests in this country in whose environs the camp-sites may be constructed. Such camp-sites would be particularly useful in giving city-bred school children and college students an opportunity to live in country side and come into closer touch with nature. Group excursions at concession rates may be organized in these camp-sites for industrial workers during such periods when there are no camps.

9 - OCT 1955

Rural Broadcasts for October 1955

Saturday, 1st October 1955—

Talk in Tamil arranged by the Department of Harijan Welfare, Government of Madras.
Uzhaippinale: Song;
The Adult Literacy Class: Tirukural: Adakkamudaimai (Kural Nos. 129 and 130).
Weekly Review of Market Rates: Water-level Readings: Topical Discussion and Weather Report.

Sunday, 2nd October 1955—

Vazha Vaittavar; Musical Feature;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Monday, 3rd October 1955—

Care of Sick Goats: Discussion;
Folk Songs;
The Village Women's Forum;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Tuesday, 4th October 1955—

Farm Forum: Discussion;
Folk Arts; Burrakatha;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Wednesday, 5th October 1955—

Public Health Discussion;
Pon: Vilaiyum: Song;
Social Education under Five-Year Plan: Talk;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Thursday, 6th October 1955—

Farm Forum: Discussion;
Have you heard this song?
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Friday, 7th October 1955—

Lavani;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Saturday, 8th October 1955—

Cottage Industry: Natural Silk: Discussion;
Chittirattil: Song;
The Adult Literacy Class: Tirukural: Ozhukkamudaimai (Kural Nos. 131 and 132).
Weekly Review of Market Rates: Water-level Readings;
Topical Discussion; Weather Report.

Sunday, 9th October 1955—

Fertilizers and Manures: Discusssion;
Anthi Tiruvilakku: Song;
The Pial School of Political Science;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Monday, 10th October 1955—

Housing Our Poultry: Discussion;
Sathya Jothiyai: Song;
Irulil. Oli: Feature;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Tuesday, 11th October 1955—

Farm Forum: Discussion;
Grama Patasalaiyil: Asu Kaviroyar;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Wednesday, 12th October 1955—

Prevention of Infectious Diseases: Discussion;
Kunrin Midu: Song;
Listeners' letters;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Thursday, 13th October 1955—

Farm Forum: Discussion;
Musical Bouquet;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Friday, 14th October 1955—

Katha Kalakshepam: Prahlada Charitram;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Saturday, 15th October 1955—

Talk in Tamil arranged by the Department of Forests, Government of Madras;
Pudiador Ulagu: Song;
The Adult Literacy Class: Tirukural: Ozhukkamudaimai (Kural Nos. 133 and 134).
Weekly Review of Market Rates: Water-level Readings;
Topical Discussion; Weather Report.

Sunday, 16th October 1955—

Agricultural Chemistry: Discussion;
Thangam Vilaiya: Song;
Minor Matters (1) Serial Feature;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Monday, 17th October 1955—

Blackquarter: Discussion;
Ilamaikkanavu: Song;
Nilavalam: Play;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Tuesday, 18th October 1955—

Farm Forum: Discussion;
Folk Songs;
Maganwadi Choola: Discussion;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Wednesday, 19th October 1955—

Puerperal Pepsis: Discussion;
Bharata Jothi: Song;
Kuppaiyil Kundrumani: (1) Play;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Thursday, 20th October 1955—

Farm Forum: Discussion;
Pattaikkelungal;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Friday, 21st October 1955—

Karaha Attam: Folk Dance;
Market Rates and Water-level Readings;
Topical Discussion; Weather Report.

Saturday, 22nd October 1955—
Kashmir : House Boat : Discussion ;
Tedi Unnai : Song ;
The Adult Literacy Class : Tirukural : Ozhukkamudaimai (Kural Nos. 135 and 136).
Weekly Review of Market Rates ; Water-level Readings ;
Topical Discussion ; Weather Report.

Sunday, 23rd October 1955—
Pusa's tomatoes and Brinjals : Discussion ;
Parukkulle : Song ;
The Village Welfare Association ;
Market Rates and Water-level Readings ;
Topical Discussion ; Weather Report.

Monday, 24th October, 1955—
Samadhana Kalanjiam : Feature ;
Sathya Jothiyai : Song ;
Irulil Oli : Feature ;
Market Rates and Water-level Readings ;
Weather Report.

Tuesday, 25th October 1955—
Farm Forum : Discussion ;
Tachhuppattarai Tanigaivel : Play ;
Market Rates and Water-level Readings ;
Topical Discussion ; Weather Report.

Wednesday, 26th October 1955—
Family Planning : Discussion ;
Ettanai Kodi Inbam : Song ;
Listeners' letters ;
Market Rates and Water-level Readings ;
Topical Discussion ; Weather Report.

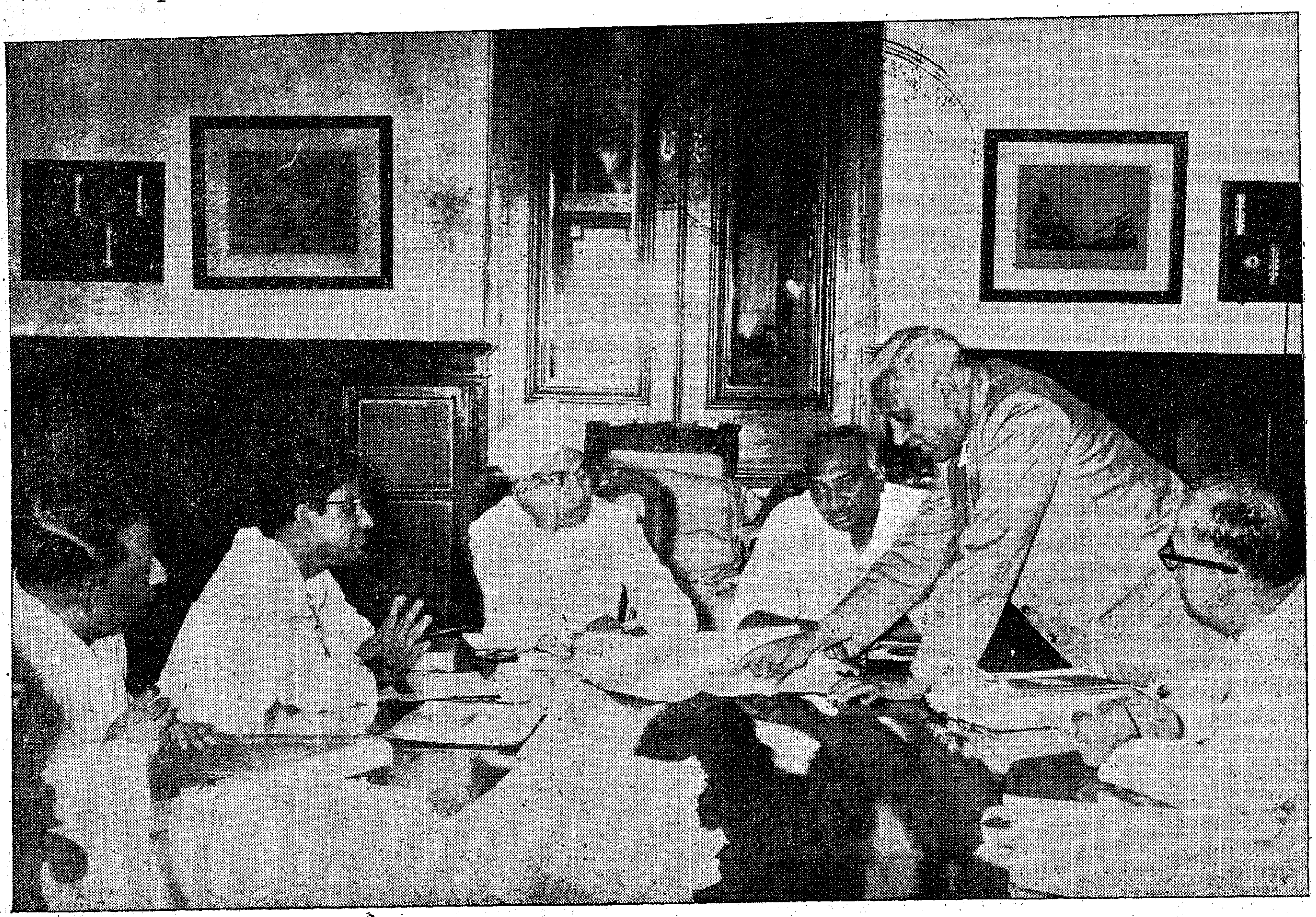
Thursday, 27th October 1955—
Farm Forum : Discussion ;
Vasanaikkalanjiyam : Kadambapodi Musical Feature ;
Market Rates and Water-level Readings ;
Topical Discussion : Weather Report.

Friday, 28th October 1955—
Samudaya Tittam : Musical Feature ;
Market Rates and Water-level Readings ;
Topical Discussion : Weather Report.

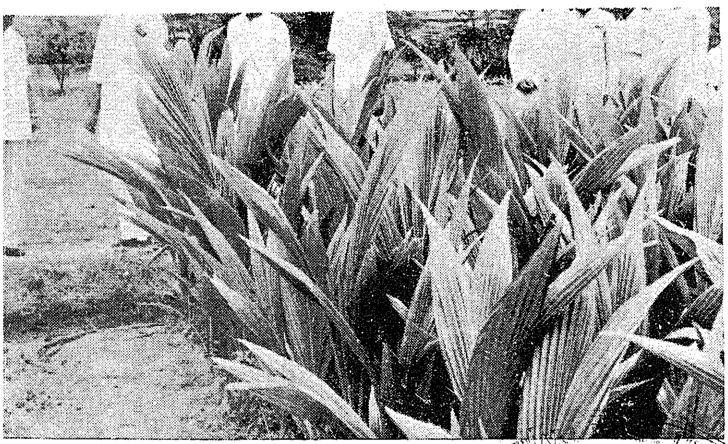
Saturday, 29th October 1955—
Vazhikattum Jothi : Feature ;
Baktipadalgal : Song ;
The Adult Literacy Class ; Tirukural : Ozhukkamudaimai (Kural Nos. 137 and 138).
Weekly Review of Market Rates and Water-level Readings ;
Topical Discussion ; Weather Report.

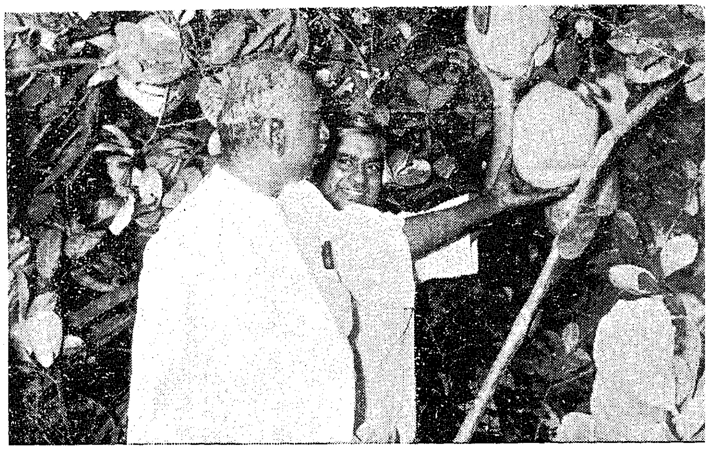
Sunday, 30th October 1955—
Jap Method of Rice Cultivation : Discussion ;
Ottada, Ottada : Song ;
Onre Kulam : Feature ;
Market Rates and Water-level Readings ;
Topical Discussion ; Weather Report.

Monday, 31st October 1955—
Milk Fever : Discussion ;
Yamarinda Mozhi : Song ;
Urumi Melam ;
Market Rates and Water-level Readings ;
Topical Discussion ; Weather Report.

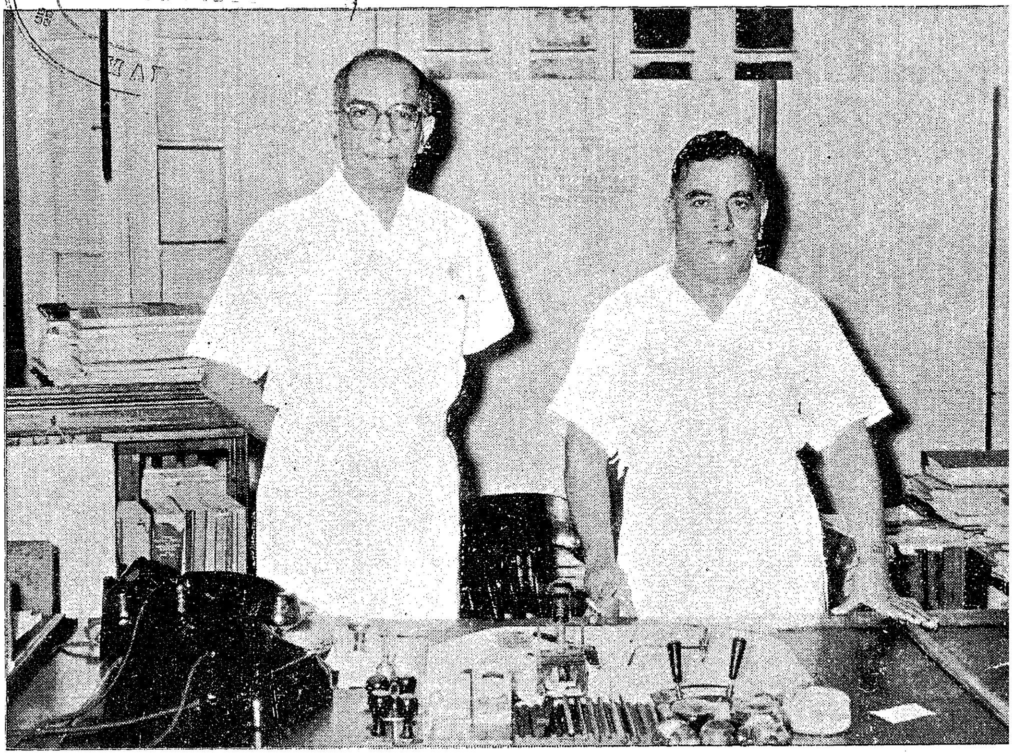


SRI K. HANUMANTHAIYA, Chief Minister of Mysore, had discussions at the Secretariat with Sri K. Kamaraj, Chief Minister, and other Ministers on the sharing of the Moyar river water between Mysore and Madras States.





(*Top*) Sri K. Kamaraj, Chief Minister, inspecting some of the Hawain Citron fruit at the Agricultural farm at Pattukkottai, during his recent tour. (*Right*) Photo taken when Sri K. Ramunni Menon, I.C.S., Chief Secretary, retired and Sri W. R. S. Sathianadhan, I.C.S., assumed charge as Chief Secretary. (*Below*) Sri K. Ramunni Menon, I.C.S., speaking at the farewell function.



Registered No. M-4767.

FOR 100 PER CENT HEALTH.

The fresh natural source of Vitamins A and D in two convenient forms

Liquid and Capsules

Fresh concentrate of Shark Liver Oil

For infants, children or adults whose digestion will not take Cod Liver Oil, Adamin is the perfect food supplement. A few drops or capsules a day give the full ration of Vitamins A and D

M.G.B. or STAYFIT
SHARK LIVER OIL

Anyone used to taking Cod Liver Oil, can get exactly the same supply of Vitamins A and D from M.G.B. or Stayfit Shark Liver Oil

A full Vitamin supply for an adult costs only one anna per day

GOVERNMENT OIL FACTORY
KOZHIKODE

A Division of the Department of
Industries and Commerce, MADRAS

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS, MADRAS, AND EDITED AND PUBLISHED BY THE DIRECTOR OF INFORMATION AND PUBLICITY, GOVERNMENT OF MADRAS